MAR 30 1908

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THE PACIFIC PHARMACIST

VOL. 1 JANUARY, 1908 No. 9

OFFICIAL ORGAN OF THE CALIFORNIA PHARMACEUTICAL ASSOCIATION

N·Y·Q

TO THE THINKING MEN AND WOMEN OF THE PHARMACEUTICAL PROFESSION, WE PRESENT OUR CLAIMS FOR PREFERENCE, BASED ON HIGH QUALITY OF PRODUCTS AND CORRECT METHODS OF BUSINESS PROMOTION .·. .·. .·. .·.

BISMUTH SUBNIT
STRYCHNINE
QUININE
ACETANILID
COCAINE
MORPHINE

NEW YORK QUININE AND CHEMICAL WORKS.
NEW YORK.

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What would
you say

if the people in your town sent their prescriptions East to have them filled, saying that you couldn't fill them as well as the man in the East?

Wouldn't you appreciate it if they gave you an opportunity to show them that you could do the work just as well or better than it was being done for them?

That is what we ask you to do toward us. Let us demonstrate that our goods are right, as are also our business methods.

A square deal and a good word for the "Cutter Products" will be appreciated.

DIPHTHERIA ANTITOXIN
STREPTOCIDIC SERUM VACCINE VIRUS

ANTHRAX VACCINE BLACKLEG VACCINE
TUBERCULIN MALLEIN

The Cutter Laboratory
Berkeley, California
Operating under U. S. Government License No. 8

Pharmaceuticals of Merit

The "WARNER" Brand

Stocked and Dispensed by Leading
Druggists Everywhere

Pills, Sugar and Gelatin Coated
Tablets, Uncoated and Coated
Triturates Hypodermic Tablets
Fluid Extracts Elixirs
Gran. Eff. Salts Capsules
and Specialties
Tono Sumbul Cordial
Ingluvin Bromo Soda
Elix. Salicylic Comp.
Triloids:
Triangular Shaped Antiseptic Tablets
Liquid Pancreopepsine
and many others

WILLIAM R. WARNER & CO.
Philadelphia

Branches—**NEW YORK CHICAGO NEW ORLEANS**

All Jobbers will honor the Specification

Distributers—Richardson & Erlen Co., Oakland; Heitshu Grant & Co., Portland;
The Western Wholesale Drug Co., Los Angeles.

OUR CATALOGUE FOR THE ASKING

TACHYPHAGIA has been declared to be our national vice; and impaired digestive functions are a feature of many ills that flesh is heir to. The relative importance of pepsin or acid, achylia, hypo- or hyper-chlorhydria, while of interest to the clinician, is of less moment than the relief of the patient. Such corrective agents are to be exhibited as have been time-proven and found clinically not wanting.

LACTOPEPTINE ***(N.Y.P.A.)***

which has for years stood the test of time and trial, is a combination of digestive and enzymogenic agents in proper proportions to secure results by stimulating impaired digestive action and activating gland secretion. Indicated in all conditions that require physiological aid to restore digestive function.

Lactopeptine (N.Y.P.A.) is furnished in Powder (dose x-xx gr.), Tablets (dose 4-6), and Elixir (dose 1 tablespoonful) after meals.

Elixir Lactopeptine (N.Y.P.A.) will be found to be an elegant and efficient vehicle, carring in perfect solution and covering the taste of Bromides, Iodides Salicylates, Chloral, etc.

THE NEW YORK PHARM. ASSOCIATION
Samples on request. YONKERS, N. Y.

Fellows' Syrup

Important Notice

This is to remind you that most sales of FELLOWS' SYRUP OF HYPOPHOSPHITES are made on physicians' prescriptions, in which case the profit to the retail druggist is nearly 100 per cent.

This means that the physician sends you a desirable customer; and the least you can do is to treat him fairly, and supply the preparation prescribed—Fellows' Syrup.

Members of the retail drug trade are warned against buying or selling colorable imitations of the well-known yellow-wrapped package of Fellows' Syrup. The highest courts have decided that such an act is an infringement of the Trade-mark Law, and makes the offender liable to a suit for damages.

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Glyco-Thymoline

Trade-Mark

Registered in U. S. Patent Office

In Use Seventeen Years

This Trade-Mark is the Property of

Kress & Owen Company

New York

EUSOMA (Echinacea Comp.)

$9.00 per doz.

Eusoma Ointment......................	$2.00	per doz.
Iodan, 10 per cent Solution............	6.00	" "
Iodan Capsules, 10 minim (2½ gr. Iodine)	7.00	" "
Iodan Capsules, 5 minim (1¼ gr. Iodine)	6.50	" "
Mercuran Capsules	6.00	" "

Are high-class prescription specialties extensively advertised to physicians. Order from your jobber or direct.

The Eusoma Pharmaceutical Co.

CINCINNATI, OHIO., U. S. A.

ANESTHETIC **ANALGESIC**

TRADE **H·M·C** MARK

(ABBOTT)

Registered

ANTISPASMODIC **HYPNOTIC**

AN UNQUALIFIED SUCCESS

Used by Physicians Everywhere **Be Sure that You are in Stock**

SUBSTITUTES ARE DANGEROUS

HYOSCINE, MORPHINE, and CACTIN COMP. (ABBOTT)

FORMULA		STYLE OF PACKAGE AND PRICES	
C. P. Hyoscine Hydrobromide - - - - -	gr. 1-100	Tube of 25 - - - - - - -	$0.40
C. P. Morphine Hydrobromide - - - - -	gr. 1-4	Per 100, 4 tubes : - - - - -	1.55
Cactin, A. A. Co., (from Cactus Grandiflorus) - - -	gr. 1-67	Bottle of 100 (bulk) - - -	1.50

Half strength of above (the use of which we recommend): 25c, 30c; 4 tubes, $1.15; 100 (bulk) $1.10.

THE ABBOTT ALKALOIDAL CO., Ravenswood Station, Chicago

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National Licorice Co.

Sole Manufacturer of

Y. & S. LICORICE

The Old-fashioned Remedy for Coughs and Colds

Also the Celebrated
**Scudder
and M. & R.**
brands

**Stick Licorice
Powd. Extracts
and Powd. Root**
in convenient packages for the trade

SERIAL No. 3208

**M. & R.
Wafers**
(In 5c bags)

**Lozenges,
Etc., Etc.**

**Our Specialties are for sale
by all Wholesale Druggists**

Advertising matter furnished to Retail Druggists
for Counter and Window Display

Coast Trade Supplied by our San Francisco Agents

W. M. DuVal & Co.

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COMPOUNDING PRESCRIPTIONS

is that feature of every well-regulated pharmacy which should be brought to the highest degree of efficiency. "M. C. W." chemicals have always been largely preferred by critical dispensers, which fact we regard as being a special recognition of their high standard of excellence. No pharmacist can offer physicians better evidence as to the careful equipment of his dispensing department than to carry a full line of "M. C. W." chemicals.

Mallinckrodt Chemical Works

ST. LOUIS NEW YORK

Leading Specialties of

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PROTONUCLEIN (Tablets, Powder and Ointment)
(*Proto-et Nucleo-plasms R. & C.*)
Primary substances of the cells of the body, containing the true Nucleins.

PEPTENZYME (Tablets, Powder and Elixir)
(*Nucleo-enzymes R. & C.*)
Nucleo-enzymes of all the glands that aid digestion.

TROPHONINE (Liquid)
(*Sat. Sol. Nucleo-[proteid-et albumen cum enzymes] R. & C.*)
Contains the highest form of Nutriment found in cell.

PANCROBILIN (Pill and Liquid)
Physiologically prepared ox-bile and Nucleo-enzymes of the Pancreas. For Intestinal Indigestion and Habitual Constipation; also as a Cholagogue.

NEPHRITIN (5-gr. TABLETS only)
The primary substances of the cells of the cortex, and the convoluted tubules of the Kidney. For Bright's and other disturbances of the Kidney.

CARNRICK'S LACTO-PREPARATA
A pure milk infants' food and perfect equivalent for mother's milk.

CARNRICK'S SOLUBLE FOOD
A milk and cereal food for infants, invalids and dyspeptics.

CORDIAL ANALEPTINE
For Rheumatism and Gouty Diathesis.

ROBOLINE CORDIAL
A tonic and nerve-stimulant.

ZYMOCIDE
A colorless, non-poisonous liquid antiseptic.

Shac Pays Well

SHAC is a short name for Stearns' Head Ache Cure.

When your customers call for SHAC, they want the same thing that you have always sold as Stearns' Head Ache Cure.

The box has both names on the label.

Considering that SHAC is so widely known, so good, so salable, and costs you but $1.50 per dozen—just half the selling price—couldn't you well afford to give it a little extra push?

STEARNS & CURTIUS, Inc.
5 PLATT ST., NEW YORK
U. S. A.

POND'S EXTRACT

"SPECIAL OFFER" CASE

for the retail trade shows a

PROFIT OF 65 PER CENT.

Case and Cost small enough
for lightest demand.

As right is reserved to withdraw this offer at any time, retailers should promptly avail of the opportunity now presented to make an unusual profit on such a widely-advertised, standard and quick-selling line as

POND'S EXTRACT

For illustrated explanatory circular write

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78 Hudson Street, Dept. 82 New York City

A SUCCEDANEUM FOR MORPHIA.

Antikamnia

OPPOSED TO PAIN.

GUARANTEED!

THE new Pure Food and Drugs Act requires all manufacturers to sell their products under a guaranty, and a general guaranty should be filed in the office of the Secretary of Agriculture at Washington.

The following is a copy of a letter issued from the Department of Agriculture to us:

> DEPARTMENT OF AGRICULTURE
> Office of the Secretary
> WASHINGTON
>
> *November 1, 1906.*
>
> *The Antikamnia Chemical Company,*
> *St. Louis, Mo.*
>
> *Gentlemen:—*
>
> *Your guarantee as to the character of the materials manufactured and sold by you, given in accordance with Circular 21 of this office, has been received, found to be in proper form and is regularly filed. The serial number attached thereto is No. 10.*
>
> *Respectfully,*
> *W. M. HAYS, Act. Sec'y.*

All Antikamnia Preparations are sold under this guaranty and our Serial No. 10 appears on every package sold under the new law, thus assuring the retail drug trade of the absolute reliability of these pharmaceuticals.

The Antikamnia Chemical Co., St. Louis, Mo., U.S.A.

Cela Kut Liquid Court Plaster Is 90 Per Cent ANTISEPTIC

COLORLESS AND WATERPROOF PUT UP IN TUBES SEALED

Cap and Foot with an impervious, rubber like preparation that **prevents Evaporation.** This adheres to the cap, and its protective qualities are not destroyed in opening the tube. Tubes are mounted on handsome scarlet and white display card.

CELA KUT IS

the best and most convenient packaged preparation of its kind. 60 cents dozen. Postal will bring sample. Your jobber or

Lee Chemical Mfg. Company
Detroit, Michigan

Guaranteed **Serial No. 2254**

The "Fairchild" Products

Prescription Goods

The "Fairchild" products, like all prescription goods, help to maintain the natural relation of mutual dependence between prescriber and dispenser. The uses of these products are important and various, and many have certain activities permitting of simple demonstration which make them peculiarly interesting under investigation.

These products are offered with absolute assurance of accuracy and reliability.

Fairchild Bros. & Foster
NEW YORK

TO THE TRADE

Your customers hold you responsible for the goods you send them. They depend upon your assurance that the goods are up to the standard. Do not, therefore, jeopardize your business by handling unknown goods. Carry on your shelves only products of reputable manufacturers which have an established reputation.

ALWAYS SPECIFY

GLENN'S
SULPHUR SOAP

the original and best combination of its kind and see to it that your jobber does not substitute an inferior brand.

Diamond Dyes

Always

Sell Themselves

We advertise Diamond Dyes in **all** the women's magazines **all** the time. When the public thinks of dyes it thinks of Diamond Dyes. The demand for them proves this.

Diamond Dyes are a habit; one of the most agreeable, economical habits that one can have. You are never stuck with Diamond Dyes. All that your customers need to know is that you keep them; and your steady profits are a certainty.

Recommend Diamond Dyes to Your Customers.
They Will Thank You for It.

WELLS & RICHARDSON CO., - - BURLINGTON, VERMONT

THE

Pacific Pharmacist

Official Organ of the California Pharmaceutical Association

AN INDEPENDENT JOURNAL DEVOTED TO SCIENTIFIC PHARMACY AND THE INTERESTS OF THE DRUG TRADE

Entered as second-class matter September 30, 1907, at the postoffice at San Francisco, California, under the Act of Congress of March 3, 1879.

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Albert Schneider, H. B. Carey . . *Associate Editors*
Henry Kaplan . . . . *Business Manager*

Address all communications and make all checks and money orders payable to The Pacific Pharmacist.

Communications on questions pertaining to Pharmacy and the Drug Business are solicited. The name of the writer should accompany every article, not necessarily for publication, but as a guarantee of good faith.

No attention will be paid to anonymous articles. Stamps should be enclosed if rejected communications are desired returned.

PLEASE NOTIFY THIS OFFICE IF YOU DO NOT RECEIVE THE JOURNAL REGULARLY

Editorial Notes

ADULTERATION, IMPURITY AND INFERIORITY IN QUALITY We recently called attention to the difference between substitution and imitation, which are sometimes confounded with each other, and to the moral turpitude generally involved in both. Another case of confusion worse confounded is that of adulteration and variation from established standard. Strictly speaking, adulteration is the wilful admixture of something of less value or no value or possibly actually injurious with an article of greater value, for the purpose of reducing its cost to the dealer. An impurity may be an adulteration, but not necessarily so. Commercial sodium bicarbonate contains small quantities of sodium chloride and sodium sulphate, which are present for the reason that the article cannot be made without them, except at a great cost, and as they are harmless, and it is expensive to remove them, the bicarbonate is usually sold with these impurities in it. They have not been added for the purpose of cheapening the cost. They are simply impurities that have not been removed. By reason of their presence, the salt thus sold does not conform to the standard of the United States Pharmacopœia, which requires it to be nearly chemically pure. This variation from standard is not an adulteration, but an impurity, yet the National Pure Food and Drugs Law, and the Pure Drugs Law of this State both declare that such a variation from standard is an adulteration within the meaning of these acts.

Here we have a new interpretation put into a word by the laws of the land, that is not in accord with its ordinary meaning. In connection with this subject, we call attention to some criticisms on the report of the A. Ph. A. Committee on the drug market, by Professor C. E. Caspari, on another page.

THE CALIFORNIA STATE BOARD OF PHARMACY Has just issued a list of all licentiates and assistants in good standing to June 30, 1908, and also a circular giving information in regard to certain matters connected with the sale and registration of poisons and habit-forming drugs. The circular calls attention to the fact that poisons can only be sold by registered pharmacists, and that all poisons included in Schedule A must bear labels containing the word poison with the skull and cross-bones in vignette, and with the antidote prescribed by the Board, and also with the name and address of the seller.

Should any druggist have failed to receive this circular, we strongly recommend him to write to the secretary for a copy.

The Board also sends out a copy of the decision by the Minnesota Supreme Court affirming the constitutionality of the annual charge of $2.00 for re-registration. A part of this decision reads as follows:

> The fee ($2.00) provided for by the statute is not in any proper view a tax upon the business of pharmacy, nor is the amount thereof at all unreasonable. It is imposed only as a charge upon those engaged in the business of pharmacy for the support and maintenance of the machinery provided by statute for its regulation. License fees of this character are sustained under numerous analogous statutes.

Pharmacy Prosecutions We note that the Board of Pharmacy is rigorously enforcing the law in regard to registration. It is only just that those who are registered and who comply with the law in other respects should be protected from competition with persons who disregard the law. In San José a number of arrests have been made, the offenses charged consisting of the employing of incompetent clerks in compounding prescriptions, the selling of poisons and inferior drugs. It is stated that one store was found in which not one of the employés was registered.

PERCENTAGE OF ALCOHOL IN FLUID EXTRACTS, ETC. We anticipate there will be considerable difficulty in obtaining correct data as to the percentage of alcohol in fluid extracts, etc., so that they may be correctly labelled. Some persons consider that if they give the amount of alcohol in the menstruum that will be the percentage in the fluid extract, but this would be very far from correct. The moisture in the drug has to be taken into account. In some it is about three per cent, in others nearly five times as much. This, of course, affects the alcohol content in the finished product. Evaporation during percolation, etc., still further reduces the alcohol per cent, so that any one who will make an exact estimation of the amount of alcohol in a finished fluid extract will find that it differs considerably from the percentage in the menstruum employed. This difference will not be the same for all drugs; in fact, scarcely any two will give the same results. This should be borne in mind by pharmacists when they are getting their labels printed.

PARCELS POST Drummers don't want the Parcels Post. They foresee evil in it for their customers, the dealers in the country towns. At the annual banquet of the Commercial Travelers' Association in this city last month a letter was read from F. B. Dickson, Secretary of the California State Retail Hardware Association, in which he urged the importance of passing a resolution in which the congress shall express its ideas regarding the much-talked-of Parcels Post bill, and which is to come up at this session of the United States Congress. He declares in the letter that there never was a bill of greater importance to the commercial interests of the country. He urged that the members arouse every energy for the defeat of the bill. The letter states that the damage the railroads and the trusts can do is nothing as compared with the damage the Parcels Post will do to the business interests generally, "if the government should go into the express business, for this is just what the law means," says the writer. In conclusion he says: "We do not want the Parcels Post because it would injure the farmer and merchant and promote concentration of capital. We don't want it because we don't want European conditions to exist in our country. In European countries, where the Parcels Post exists, the scarcity of the retail merchant is quite noticeable. These conditions were not always so."

The Chicago Journal says:

> A Parcels Post will drive out of business into bankruptcy the innumerable merchants who now prosper in the country and in small communities. It will operate for the benefit of great mail-order establishments which are already, with the aid of freight rates and the express companies, altogether too active for the peace of country dealers. Having the advantage of large capital and the ability to make extensive purchases, they can buy cheaper than small merchants, and when they have the use of the government postal service they will be able to undersell local merchants everywhere.

Parcels Post and Good Roads Postmaster General Meyer, in his enthusiasm over the projected Parcels Post, after trying to sugar-coat the bitter pill to the country merchant by promising him a lower rate of postage over rural free delivery routes than the city man has for his suburban customers, says:

> Another inevitable result will be the improvement of the roads due to the increased transportation over the rural routes. One can not improve the roads without benefiting the farmer, nor can one benefit the farmer without benefiting the rest of the country.

Who is going to improve these country roads? Will the Federal government? That would be centralization such as the framers of our constitution never dreamed of. And if the townships and counties still have to do this work, will the Federal government foot the bills, wholly or in part? Of course not. Imagine the traffic over these roads around Chico, Colusa, Napa, Sebastopol, Santa Rosa and Martinez being so great by reason of the enormous freightage of U. S. mails that the roads had to be repaired in consequence! Why, it would take all the merchandise now sold in those towns, from farm implements, pianos and lumber to kid gloves and neckties to necessitate such repairs. Evidently Mr. Meyer wants to completely obliterate the country towns, or he does not know what he is talking about, and yet President Roosevelt commends this report to Congress!

One of the reasons given in favor of

the Parcels Post is that it would put a quietus on the express companies, who now charge extortionate rates for their services. So the government should go into the express business. This kind of reasoning would lead to the placing of all business in the hands of the government—a **reductio ad absurdam.**

FREE ANTITOXIN There is about as much excuse for free antitoxin as there is for free compound cathartic pills and free school text-books.

It cannot be denied that it is desirable for the State, county and municipality to combat infectious and contagious diseases by any and all suitable means available. If it is essential to this end to distribute free antitoxin, free antiseptics, free drugs generally, free medical services, etc., then, by all means, let it be done. But is this essential? We do not see it in that light.

The recent free antitoxin discussion centers about the so-called "indigent poor," whom we shall always have with us. It would certainly be brutal and inhuman to deny medical aid to children, simply because the parents are too poor to pay for such services and the necessary drugs. Why, however, should the exception be made in the use of antitoxin?

If arrangements can be made which will make it possible to distribute free antitoxin to the children of parents that cannot pay, then by all means let it be done. Such free antitoxin should be of the best and should be properly administered by competent physicians. Pennsylvania, Massachusetts and Illinois now supply free antitoxin. Some authorities in these States declare themselves in favor of it, while others oppose it very strongly, declaring that the privilege is often much abused.

SCARCITY OF DRUG CLERKS Proprietors still continue to complain of a scarcity of clerks, more particularly of reliable ones. Notwithstanding the increased pay and better hours, good clerks are still in demand. We do not care to print all that we hear about clerks of the other kind, but we regret that the complaint has come to us frequently of late about clerks who indulge too much in intoxicating liquor. This is most unfortunate, for some men otherwise valuable as prescriptionists and salesmen cannot be employed. If they succeed in getting a position, it is only to lose it after a short trial.

A number of suggestions have been made with a view of relieving this scarcity of clerks. One is to employ women on the ground that they are more reliable, more honest, never given to drink, and seldom unmanageable. If only all of the men who now keep themselves floating from pillar to post by reason of their drinking habits would become permanently sober, it would go a long way towards relieving the stringency.

Another suggestion is to get more boys to go to pharmacy colleges and fit themselves for their calling. This is a very good idea, because there are many clerks in drug stores who are only indifferent pharmacists. They are employed because they are the best that can be had, but while they do well in some departments, they are not good all-round clerks.

Another idea has been advanced by Mr. Otto E. Bruder in the **Druggists' Circular,** who suggests as a panacea that proprietors pay more salary, require shorter hours and give such good treatment that clerks will like their employers and want to work for them. Here is what he says: "Do something that your clerk will REALLY like you, and there will be no scarcity of clerks, neither will your clerk be in any hurry to enter the ranks of the proprietors."

This reminds us of the old English song, "We May Be 'Appy Yet."

NEW POISON LAW IN SWEDEN It is refreshing to find a country legislating on the sale of poisons without singling the unfortunate druggist as the sole victim of the law's animadversions. In Sweden poisons are divided into two classes: First, poisonous drugs and their products, and, second, anilin oil and poisonous colors or preparations of the same. This latter class includes not only such arsenical colors as are inhibited by our State law, but coloring substances obtained from antimony, barium, lead, chromium and other metals, as well as gamboge and picric acid. Certain articles must not be sold under any circumstances, such as children's toys colored or printed with poisonous colors. Tin-foil used for packing food, etc., must not contain more than 1% of lead. Cooking utensils must not have more than a very small percentage of lead, but solder may contain 10% of lead.

Pharmacists Not Members of the A. Ph. A. Dr. H. M. Whelpley, editor of Meyer Brothers' Druggist, makes the somewhat remarkable statement "that no individual has arisen to pharmaceutical distinction (in America) outside of its (the A. Ph. A.) ranks since the organization began in 1852." Startling as the observation is, we cannot recall a single instance to refute the statement. Dr. Whelpley very forcibly adds that "the progressive pharmacist should consider it a privilege to join the association."

BLENDS, MIXTURES, COMPOUNDS

These terms appear to be a source of great confusion. They apply to admixtures of two or more substances, whether solid, liquid or gaseous, and have a very important significance in connection with the Federal Food and Drugs Act of June 30, 1906.

A blend is a mixture of two or more substances closely similar in kind. The terms mixtures and compounds are used synonymously with each other and indicate a commingling of two or more substances dissimilar in kind. A mixture of two or more kinds of rye whisky would be a blend, whereas beer, wine or cider, fortified by whisky or brandy, would be a compound or mixture, and not a blend. Mixing two kinds of wheat flour constitutes a blend. Wheat flour, rye flour and buckwheat flour mixed together is a compound. Again, whisky or brandy, to which wild cherries, juniper berries, or carraway, etc., has been added, is a compound. A blend may contain a dissimilar substance which converts it into a compound.

A single substance containing only such elements as are natural to it, is not a blend or a compound. For example, a wine, brandy or whisky differing from another wine, brandy or whisky in bouquet or aroma, but having an identical origin, is not a blend or a compound, but constitutes an identical substance in so far as the above terms are concerned. Thus the difference between old and new whisky or wine cannot be designated by the term blend.

There are numerous substances which will require the wisdom of a police justice to decide whether they are blends or compounds.

There are about 46,000 druggists in the United States.

the Parcels Post is that it would put a quietus on the express companies, who now charge extortionate rates for their services. So the government should go into the express business. This kind of reasoning would lead to the placing of all business in the hands of the government—a **reductio ad absurdam.**

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The recent free antitoxin discussion centers about the so-called "indigent poor," whom we shall always have with us. It would certainly be brutal and inhuman to deny medical aid to children, simply because the parents are too poor to pay for such services and the necessary drugs. Why, however, should the exception be made in the use of antitoxin?

If arrangements can be made which will make it possible to distribute free antitoxin to the children of parents that cannot pay, then by all means let it be done. Such free antitoxin should be of the best and should be properly administered by competent physicians. Pennsylvania, Massachusetts and Illinois now supply free antitoxin. Some authorities in these States declare themselves in favor of it, while others oppose it very strongly, declaring that the privilege is often much abused.

SCARCITY OF DRUG CLERKS Proprietors still continue to complain of a scarcity of clerks, more particularly of reliable ones. Notwithstanding the increased pay and better hours, good clerks are still in demand. We do not care to print all that we hear about clerks of the other kind, but we regret that the complaint has come to us frequently of late about clerks who indulge too much in intoxicating liquor. This is most unfortunate, for some men otherwise valuable as prescriptionists and salesmen cannot be employed. If they succeed in getting a position, it is only to lose it after a short trial.

A number of suggestions have been made with a view of relieving this scarcity of clerks. One is to employ women on the ground that they are more reliable, more honest, never given to drink, and seldom unmanageable. If only all of the men who now keep themselves floating from pillar to post by reason of their drinking habits would become permanently sober, it would go a long way towards relieving the stringency.

Another suggestion is to get more boys to go to pharmacy colleges and fit themselves for their calling. This is a very good idea, because there are many clerks in drug stores who are only indifferent pharmacists. They are employed because they are the best that can be had, but while they do well in some departments, they are not good all-round clerks.

Another idea has been advanced by Mr. Otto E. Bruder in the **Druggists' Circular,** who suggests as a panacea that proprietors pay more salary, require shorter hours and give such good treatment that clerks will like their employers and want to work for them. Here is what he says: "Do something that your clerk will REALLY like you, and there will be no scarcity of clerks, neither will your clerk be in any hurry to enter the ranks of the proprietors."

This reminds us of the old English song, "We May Be 'Appy Yet."

NEW POISON LAW IN SWEDEN It is refreshing to find a country legislating on the sale of poisons without singling the unfortunate druggist as the sole victim of the law's animadversions. In Sweden poisons are divided into two classes: First, poisonous drugs and their products, and, second, anilin oil and poisonous colors or preparations of the same. This latter class includes not only such arsenical colors as are inhibited by our State law, but coloring substances obtained from antimony, barium, lead, chromium and other metals, as well as gamboge and picric acid. Certain articles must not be sold under any circumstances, such as children's toys colored or printed with poisonous colors. Tin-foil used for packing food, etc., must not contain more than 1% of lead. Cooking utensils must not have more than a very small percentage of lead, but solder may contain 10% of lead.

Pharmacists Not Members of the A. Ph. A. Dr. H. M. Whelpley, editor of Meyer Brothers' Druggist, makes the somewhat remarkable statement "that no individual has arisen to pharmaceutical distinction (in America) outside of its (the A. Ph. A.) ranks since the organization began in 1852." Startling as the observation is, we cannot recall a single instance to refute the statement. Dr. Whelpley very forcibly adds that "the progressive pharmacist should consider it a privilege to join the association."

BLENDS, MIXTURES, COMPOUNDS

These terms appear to be a source of great confusion. They apply to admixtures of two or more substances, whether solid, liquid or gaseous, and have a very important significance in connection with the Federal Food and Drugs Act of June 30, 1906.

A blend is a mixture of two or more substances closely similar in kind. The terms mixtures and compounds are used synonymously with each other and indicate a commingling of two or more substances dissimilar in kind. A mixture of two or more kinds of rye whisky would be a blend, whereas beer, wine or cider, fortified by whisky or brandy, would be a compound or mixture, and not a blend. Mixing two kinds of wheat flour constitutes a blend. Wheat flour, rye flour and buckwheat flour mixed together is a compound. Again, whisky or brandy, to which wild cherries, juniper berries, or carraway, etc., has been added, is a compound. A blend may contain a dissimilar substance which converts it into a compound.

A single substance containing only such elements as are natural to it, is not a blend or a compound. For example, a wine, brandy or whisky differing from another wine, brandy or whisky in bouquet or aroma, but having an identical origin, is not a blend or a compound, but constitutes an identical substance in so far as the above terms are concerned. Thus the difference between old and new whisky or wine cannot be designated by the term blend.

There are numerous substances which will require the wisdom of a police justice to decide whether they are blends or compounds.

There are about 46,000 druggists in the United States.

Original Communications

A CONTRIBUTION TO THE KNOWLEDGE OF THE COLORING MATTERS OF FLOWERS*

By W. T. Wenzell, Phar. M.

Flowers are universally admired on account of their brilliant and varied colors, their form, and, in many instances, their fragrance, but any one who has paid attention to botany or has a general knowledge of plants knows that not every flower possesses all of these characteristics. A great number of flowering plants, I may say the majority, produce only small and unnoticeable inflorescences, like those of grasses, and many other field weeds and forest trees.

It is rather to flowers presenting large expanded surfaces of brilliant colors, vieing in beauty with the colors of the rainbow and the solar spectrum that I would introduce you to show why they assume these bright colors, and why this, that or any particular flower or blossom should possess this, that or the other particular color. Why, for instance, the buttercup is always yellow, the harebell blue, and the purple foxglove dappled with red spots. Why does the skyblue prevail in the veronicas, and white in the umbellates? These are some of the questions which I shall briefly endeavor to answer from the modern standpoint of evolution.

The colors of flowers usually reside in the specialized organs known as the petals, though they may also be found in the leaves replacing the chlorophyll, in the sepals and bracts, or more so in the stamens and the pistil.

As a matter of information to persons who should happen to be imperfectly acquainted with the structure and mission of flowers, a brief description of the organs which go to make up a typical flower may be considered proper.

The essential elements of a flower are not at all the showy and brilliant floral leaves, but a set of comparatively small and unnoticed organs occupying the center of most of the ordinary flowers.

The simplest type of flower consists of two such organs only, one a pistil or ovary containing a embryo seed, and stamens which produce the pollen necessary to fertilize it.

The production of the seed is in fact the sole function of the flower; every additional part is only useful in so far as it conduces to this end.

In the most simple blossom fertilization is effected by a grain of pollen from a stamen falling upon the stigma or sensitive surface of the pistil, from thence sending forth a pollen tube, which penetrates the ovule or embryo seed and impregnates it.

As a rule, however, it is not desirable that a flower should be fertilized by pollen from its own stamens. Mr. Darwin has shown that in many cases when a pistil is fecundated by pollen from a neighboring blossom, or still better from a neighboring plant, it produces more and sounder seeds, and therefore is capable of also producing more and sounder offspring. There are two ways by which plants derive the benefits of cross-fertilization, the one is by adapting themselves to fertilization by means of the wind, the other by adapting themselves to fertilization by means of insects.

In order to allure insects, nature has provided that flowers should secrete small quantities of honey to induce them to visit one flower after another of the same kind, the highly colored petals serving also as a guide for the insects, as it is well-known that certain insects are attracted to and prefer certain colors.

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* Read before the California Pharmaceutical Association, November 14, 1907.

The function of the flower, therefore, is to produce pollen in order to fertilize the ovary, the brightly colored petals to attract the fertilizing insects which feast upon the nectar secreted by these; all specialized to bring about the cross-fertilization of the flower.

So much by way of introduction. Now, since the bright coloring principles usually reside in the petals or floral leaves, and since petals have for their main, if not for their only function, the display of such colors as are attractive to fertilizing insects, it is clear that we may now make the inquiry, what was the original color of the organs from which the petals were developed?

We may take it for granted that the primordial petals would revert to and follow the color of the parts out of which they were originally evolved, so that, should we regard them as being derived from leaves we might fairly conclude that the earliest petals were green; but, on the other hand, if we should regard them as modified stamens, then we could conclude that they were yellow. Now which of these alternatives is most likely to be true? Botanists have accepted the latter proposition as the one likely to be true. They consider that in all probability petals are enlarged and flattened stamens set apart for the special agency of attracting insects; that any flower which presents brilliant colors to attract the eyes of the beetles, the bees and the butterflies, would naturally receive the greatest number of visits from their insect friends. As a matter of fact, the earliest, and also the simplest types of existing flowers are always yellow, sometimes white, but never blue. This in itself would be sufficient ground for believing that yellow was the original color of all petals.

If we assume that the earliest petals were derived from flattened stamens, and that their color was yellow, how did some of them afterwards come to be white, red, purple, violet and blue? From the researches of Darwin, Wallace, Lubbock and Hermann Mueller it is now known that not only are the colors of flowers as a whole intended to attract insects in general, but that certain colors are definitely intended to attract a special kind of insect. This fact establishes the close relations which we must admit to exist between insect life and the possible mutability of colors. That when, from whatever cause, the favorite color of any particular flower may be out of season, the honey-seeking insect will be impelled to visit different colored flowers, and thus carry the pollen to flowers capable of forming or producing a change of color, and eventually new varieties.

The generally accepted belief is that enunciated by Goethe and named Goethe's doctrine, who held that all parts of the flower are modified leaves, that such gradual transition could be traced between them as from the ordinary leaf to the sepal, the petal, the stamens and the ovary; but unfortunately for the truth of this theory we now know that the earliest flowers had no sepals or petals, but that the primitive flowering plants had simply leaves on the one hand, and stamens and ovules on the other.

There are at present surviving some of these oldest types of flowers as exemplified in certain gymnosperms. The gymnosperms are geologically earlier than any other flowering plants, occurring most likely during the earlier tertiary period, whilst the origin of petals and sepals must be referred to the post-tertiary period of the world's history; that, therefore, the primitive flowers had no petals at all, and that petals could only have appeared at some later period.

If it be admitted that the earliest petals in the history of floral development were derived from flattened stamens, and, as is well known, most of the stamens of the present period still have this color, would it not then naturally follow that they (the petals) would be, for the most part, yellow in color, like the stamens from which they originated? And further, if we concede that this is the case, that the earlier flowers were yellow, that some of them became first white, changing into this pigment, closely co-related to the yellow; that next, by a step towards evolution, a few of them became red or purple, which finally emerged through thousands of years of gradual evolution into the various shades of lilac, violet and blue, modifications that seem to follow in this definite and regular order?

That the principle here advanced is true, can be verified by the common bell-flower, the **Campanula rotundifolia,** as one in which the line of descent can be clearly traced, from a primitive yellow to its highest state of development, and that its ancestors have passed successively through all of the intermediate stages of colors. But we need not go to the blue bells of Scotland to prove the existence of a progressive law which regulated these changes. Our little forget-me-not **(Myosotis versicolor)** gives us a home lesson. In this flower the calyx presents a pale yellow when first it opens its diminutive corolla, but as it grows older it becomes faintly pinkish, passing into white and red, and ends by gradually becoming blue, passing in its transitions, through the various stages of purple and violet.

It will now be readily understood that these progressive changes in color follow a general law, beginning with yellow or white, and ending in blue. The evening primrose, for instance, has a white flower in its earliest stages of development, followed by a red one. The morning glory opens its corolla, a pinkish white, changing into red, purple or blue flowers.

The coloring principles of flowers may be divided into two classes, monochromatic and polychromatic; that is, simple colors or compound colors. The yellow and white may be placed in the first class. The yellow is the primitive color as exemplified in the stamens from which the first petals were derived, to which the orange may be also added. This primitive yellow is characterized by its resistance to the action of acids and alkalies, its insolubility in water and weak alcohol, but its ready solubility in ether. The white coloring principles contained in the spadix of the calla lily and the white pond lily and analogous flowers possess analogous characteristics to those of the yellows mentioned. On account of their permanency and resistance to the action of chemical influences, the yellow and white coloring matters may properly be designated as pigments. This yellow pigment so common in such floral leaves as our eschscholtzia, the marigold, daffodil and otherwise variously distributed not only in the phanerogamous or flowering plants, but also in the cryptograms and fungi in general, is also found in the animal kingdom, as the yolk of eggs and as a constituent of the **corpus luteum.** This pigment was first isolated from the marigold by Berzelius, and named by him anthoxanthin (from anthos flower and xanthin, signifying yellow). Thudichum found the same pigment in seeds and berries, the yolk of eggs, and the **corpus luteum** of mammalia. It was named by him lutein, the Latin luteus, signifying yellow. Since then Kühne and Krückenberg closely studied its chemical characters and occurrence, and they have given it the more appropriate name of lipochrome, the literal meaning of which is fat-color, since it generally occurs in combination with a fatty substance from which it can only be separated by saponification, and this fully accounts for the solubility of this pigment in ether and insolubility in weak alcohol. The lipochromes respond to certain characteristic tests.

In the solid state, when treated with concentrated sulphuric acid or nitric acid, it gives a blue color reaction, with iodo-potassium iodide (with some exceptions) a bluish-green color. When exposed to sunlight it is rapidly bleached, and is then converted into cholesterin. Spectroscopic examination shows one or two absorption bands in the green and blue portions of the spectrum.

Now, what may be said regarding the white color pigment in floral leaves? The spathe of the calla lily **(Calla ethiopica)** on account of its ivory-like surface and pure white color seemed a suitable subject for investigation. This white pigment was readily dissolved in ether to a colorless fluid, which, on spontaneous evaporation deposited the white pigment unchanged. A solution of this pigment in dilute alcohol, when treated with various reagents, produced yellow or red color-reaction. The pigment itself was not sensibly influenced by dilute acid or alkalies, thus showing the apparent close relation to its yellow congeners, the lipochromes.

Having disposed of the yellow and white pigments of flowers, we now propose to enter upon the so-called chromogens, which furnish us the most beautiful of natural colors, vieing in beauty with the colors of the rainbow and those of the solar spectrum. The name chromogens has been selected mainly from the fact that these coloring principles may each assume under peculiar circumstances an endless variation of tints and hues, and we see, therefore, that the conception of homogeneous colors, which by admixture could produce the colors of flowers according to earlier observers was simply a fallacy. They regarded, for instance, the coloring matter of roses, dahlias, peonies, etc., as cyanin reddened by acids. On the other hand, they believed scarlet-red flowers to consist of a mixture of xanthin with cyanin. In order to prove or disprove this broad assertion of Fremy and Cloez, that scarlet-red flowers were mixtures of cyanin and xanthin, I subjected the petals of the scarlet variety of the horse-shoe geranium to a chemical and spectroscopical research. This flower, belonging to the natural order Geraniaceæ, and commonly known as the horse-shoe geranium, is characterized by the feature that its leaves are always marked with a dark concentric ring or zone of various shades of color; hence its botanical name, **Pelargonium zonale.** It remained for this particular flower to prove that the conception of two homogeneous coloring principles, to which all of the observed shades and hues of colors in flowers could be referred, was a fallacy. The result of this investigation showed that the flowers of the horse-shoe geranium were not a mixture of the blue cyanin, and the yellow xanthin, but consisted of five distinct red coloring principles, each possessing a different fluorescence and different absorption bands to be seen in its alkaline and acid solutions, when examined by the spectroscope. They were all shown to be chromogens by their passing through changes of colors when subjected to the action of alkalies and acids. One of these coloring matters was obtained in the form of red needle-shaped crystals. These crystals in ammoniacal solution, when viewed by transmitted light, gave a red color, and by a reflected light, a green. The crystals were, therefore, dichroic. Its fluorescence is red. It was the first instance of the discovery in flowers of a chromogen in the crystalline state.

Experiments on violets, carnations, and bachelor's buttons have been recently made on similar lines, the result of which have so far corroborated previous labors on this subject. When violets were made into a tincture by macerating with diluted alcohol, the chromogen was dissolved, making a liquid either colorless or with a pale tinge of lilac, which, when treated with a few drops of sulphuric acid, developed a beautiful carmine color. On carefully adding to the liquid ammonia water the carmine color passed to a purple, then became nearly colorless, and on the further addition of ammonia, a violet color appeared, changing rapidly to a green. On adding now acid to the green solution, the liquid underwent a reverse change of color. It was found that the liquid passes through a chromatic scale of from green to blue, to violet, to purple, and to red.

The treatment of flowers themselves by alkalies or acid forms an exceedingly interesting subject. The violet color of violets may be changed by the vapor of ammonia, first to a blue, then to a green, and finally to a yellow. On dipping the flowers into an acid solution, a red violet is the result. On subjecting the flowers to the vapors of sulphurous acid their color is bleached to a white, but in every instance when the colors are thus changed, the original color may be, by careful management, restored, a characteristic belonging to all true chromogens. The red violets are best obtained by exposing the green violets to the vapors of glacial acetic acid, when the green color will be changed, first to blue, then to violet, then to purple, and finally to the red, and it is here where the color change comes to an end.

As to the state in which chromogens exist in flowers, the view may be taken as based upon chemical data. It is conceivable that all coloring principles belonging to the class of chromogens are, when separated in the free and solid state, red, as was ascertained by the crystals obtained from the horseshoe geranium. The color of violets is easily extracted by dilute alcohol—the liquid is mostly colorless, but is sometimes tinged with lilac. Strong alcohol does not extract the color at all. As has been stated, the coloring in flowers, when perfectly neutralized by a base, becomes colorless. This colorless solution is changed to red by acids, and to green by alkalies.

It appears that in the flower the violet is produced by the presence of the alkaline sodium phosphate (HNa_2Po_4) and that when a flower is extracted with diluted alcohol, the coloring matter is removed from the influence of this salt. In blue flowers this alkaline sodium phosphate is a constant constituent; in the reds, the sodium phosphate (H_2NaPO_4). The alkalinity of the salt (HNa_2PO_4) is not sufficient to produce a green color; hence nature does not produce green flowers.

It may be proper to state that the

chromogens of the most highly developed flowers only are capable of producing the greatest variety of flower tints.

The flower commonly known as the bachelor's button is only capable of producing colors from blue to red. We cannot convert it to either a yellow or violet flower. The white bachelor's button of the florists cannot be changed by acids or alkalies into any color because it contains the lipochrome pigment only. There are other flowers that show a limited disposition to a change of color. As an example may be cited the yellow and the red dahlias. Both contain the same chromogens. The red dahlia is changed to yellow by acids, the yellow dahlia is changed to red by alkalies, without any intermediate play of colors, showing that these coloring principles are the opposite of those of the pelargoniums.

The carnations or pinks form a distinct type. Their colors are white, yellow, pink and maroon; no blue, violet or purple pinks are known.

The transformations of color by the usual reagents are also peculiar. When the colored flowers are bleached by sulphorous acid, that is to say, when the color unites with this reagent to form a colorless combination, and the flowers are treated with ammonia, a beautiful canary yellow color results, whilst in the pelargonium type, it would be changed to a green by a similar treatment.

In previous investigation made by the writer, it has been shown that the chromogens in flowers do not as a rule consist of one principle only, but are frequently composed of two or more, each possessing peculiar properties by which they may be separated from each other and identified, and not only this, but it may be further assumed that in each family belonging to the same natural order a similarity of coloring principles will be found to exist.

I am now preparing for the **Pacific Pharmacist** a paper on the coloring matters existing in the flowers of the tree mallow, the **Cavatera assurgentiflora** Kellogg, a well-known shrub indigenous to this State.

THE HOUSE-FLY AS A DISEASE DISSEMINATOR

There is a popular notion that house-flies are scavengers that tend to purify air and surroundings by eating filth. Those who hold this opinion also hold that rats and mice purify farm dwellings, and that frogs and water-rats in the well purify the water. This is all wrong. House-flies are very nasty in their habits. They get into everything, and a little of everything always clings to them. They have six very large (comparatively) feet, which they bring in contact with everything, and at once proceed to walk over things, depositing what filth clings to these feet at the rate of six dabs at a time. They have a big mouth, licking and sucking apparatus, which samples everything. Flies have the annoying habit of falling into everything that is placed on the table, where they struggle for a long time until they finally crawl out, spend some time in wiping off and depositing whatever may have been clinging to them on any convenient spot, as the bald place on top of the head, the bread, the cheese, the saucer of milk, etc., and then proceed to tumble into the next dish containing a liquid, usually winding up in the syrup, where it dies after a brave struggle. The syrup is next placed on the bread and eaten, fly, filth and all. Sometimes the fly is discovered before it finds its way into your mouth, but the chances are against this.

In order to satisfy yourself that flies

must be filthy, it is only necessary to observe these interesting creatures for a short time. When not employed in falling into things or in depositing on you what filth may be in or upon them, they are busily engaged in the process called "washing," which simply consists in spreading the filth more evenly over their own bodies in order to avoid becoming lop-sided, due to a localized accumulation of filth.

Again, flies have the naughty habit of flying into your mouth just as you are about to laugh at your friend's joke. They are very ambitious, investigating your nostrils, ears and eyes, again and again returning to the work with marvelous pertinacity. If by accident you should succeed in squashing one of them with a well-directed blow, the chances are that you will next find its body serenely floating in the milk or cream pitcher.

Sufficient has been said to make it perfectly clear that the house-fly could serve as a very dangerous disseminator of diseases, such as typhoid, diphtheria, small-pox, plague, etc., conditions being suitable. Flies are **not** desirable scavengers. They should be kept out of all dwellings, and should be destroyed wherever found. They are dangerous in direct proportion to their number and to the density of the population in which they reside. Death to all flies!

THE FILTHY OYSTER

Numerous typhoid epidemics have been traced to oysters. It is known that many of the oyster-beds are washed by the sewage of cities and towns. They become contaminated with the typhoid germ, which is a filthy organism, and the disease is thus carried directly to the intestinal tract of the eater.

At best the oyster is filthy. One chances an attack of typhoid fever every time he eats a raw oyster. The free use of lemon juice may destroy some of the typhoid germs clinging to the exterior, but the acid does not reach such germs as may be in the big, greenish black mass forming the greater portion of the inside of the oyster.

Good advice is not to eat them, but if you must eat them, fry them or boil them to a finish. Boiling for two hours is supposed to destroy all germs. Fried to a crisp turn will serve the same purpose. A. S.

PHARMACEUTICAL LAW

And Matters of Legal Interest to Pharmacists

By Charles B. Whilden, Ph.G.,
Secretary of the California State Board of Pharmacy

Law, from the Latin root Lex-Leges, "is that which is laid, set or fixed; like statute, from the Latin statuere, to make to stand. A rule of being or conduct, established by an authority able to enforce its will; a controlling regulation; the mode or order according to which an agent or power acts." "In its most general and comprehensive significance, the word law denotes a rule of action and is applied indiscriminately to all kinds of action. It is, further, a rule of action prescribed by some superior, which some one inferior is bound to obey. In a more restricted sense, it is applied, not to rules of action in general, but to human action or conduct in particular." The social life is shaped and governed by relations of cause and effect, which man has himself established. The system of law links together civil and moral duties. It takes the citizen at the moment of his birth, nay, even extends its jurisdiction over his pre-natal state, and follows him with directions through the different epochs of his life.

In the days of ancient Greece the Athenians were a prey to anarchy, and they besought the great law-giver, Draco, a man of distinguished birth, of severe manners, yet of large experience in public affairs, to give them a code of laws. Thus he became the author of the first written code of laws, 621 B. C. The Draconian laws were so severe they were said to have been written in blood, and, desiring modification, the Athenians, later on, appointed Solon to draw up a new code, which, although still severe, was much more to their liking. We have all read of "The laws of the Medes and Persians, which altereth not." In the Scriptures we find the Jewish or Mosaic code. Again "The will of God as the rule for the disposition and conduct of all responsible beings toward Him and toward each other, appealing to us through our conscience and moral nature from an invisible source might well be recognized as the Divine law."

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* Read before the California Pharmaceutical Association at its annual meeting held in San Francisco on Thursday, November 14, 1907.

In former days laws were made by the decree of kings, who had absolute power of life and death, thus forming the laws of monarchy. Then again the laws were framed by bodies of men representing the powerful and wealthy classes, being in reality the laws of aristocracy; but in our own country, at the present time, our laws are made, in theory, at least, by the people, through their representatives, who are supposed to be the servants of the people, and to express their will in municipal, State and national deliberations. Thus we have today the laws of democracy.

As man reached a higher state of civilization he depended less upon nature to relieve and restore the abnormal conditions of the human system, and became more or less dependent upon the action of drugs. As the variety of agents derived from the vegetable, mineral and animal kingdoms increased, we find him devoting his attention more and more to their variety, their structure, their composition, their physiological action and therapeutic effect. So infinite became the variety and so varied the methods of preparation and mode of administration, that a system of standards became indispensable; thus we have the origin of the Pharmacopœia, the first of which was, I believe, simply a collection of recipes of certain physicians. To make the preparations of the Pharmacopœia, however, producing simples or compounds always of a certain standard strength and mixing and dispensing them for consumption, required great care, skill and ability, hence it became necessary to surround their manipulating, compounding and dispensing with safeguards by requiring that the manipulator be a person of proper knowledge and experience. This could be done only by authority of law, hence appeals have been made to the various legislative bodies to enact laws governing and regulating the practice of pharmacy and the sale of poisons, with the result that today every one of the forty-six States, together with the Territories and the District of Columbia, have such laws on their statute books. These statutes are all similar in intent, but vary in requirements. They all provide for a commission whose duty it is to examine aspirants for the degrees to practice pharmacy as to their fitness to assume the responsibilities which the scientific side of the business requires. They also make it the duty of the commission to investigate the purity and strength of the preparations kept for dispensing, which duty will shortly devolve more specifically upon the commission who are empowered to enforce the provisions of the Pure Food and Drugs law. It is also made incumbent upon the pharmaceutical commission to see that only competent qualified persons undertake the practice of pharmacy, and to enforce, by prosecution, if necessary, the various provisions of the pharmacy and poison laws. Most of the violations of these laws are simply misdemeanors. "A misdemeanor is an act committed or omitted, in violation of a public law either forbidding or commanding it." It is a mild form of crime.

The commissions above referred to are variously known as "Commissioners of Pharmacy," "Boards of Pharmaceutical Examiners," "Supervisors of Pharmacy," and other similar titles, although the most familiar title given them is "Boards of Pharmacy." Their membership varies in number from three in some States to five in many others; California and Arizona (Sec. 5, p. 2) have seven members each on their boards, while Louisiana has nine (Sec. 6). The board of New York State is composed of fifteen members segregated into three divisions (p. 3), viz: the Eastern Branch, with headquarters at New York; the Middle Branch, with headquarters at Albany, and the Western Branch, with headquarters at Buffalo.

The final appointment of the board members is usually made by the Governor, who issues the commission, although the nomination for appointment is arrived at in various ways. In many States the pharmaceutical association selects from its membership a certain number whose names are sent to the Governor, and it is his duty to select one or more of these names to fill such vacancies as may exist. In other States the selection is made by the Governor from the registered pharmacists of the State at large. In **South Carolina** the law provides that (p. 66) "The Pharmaceutical Association shall elect six pharmacists, doing business in the State, who shall constitute the Board of Pharmaceutical examiners of the State of South Carolina." In that State the Governor does not appoint, but the entire selection is left to the Pharmaceutical Association, which is incorporated. Prior to 1876 the Board of Pharmaceutical Examiners of South Carolina was under the direct jurisdiction of (p. 67, Sec. 4) the faculty of the Medical College of South Carolina and the Medical Faculty of the University of South Carolina, who had control of all matters relating to the licensing of pharmacist, apothecary and druggist. In **Nebraska** the law provides that "There shall be established in the State of Nebraska a board, to be styled the Nebraska State Board of Pharmacy. Said board shall consist of the Attorney-General, Secretary of State, Auditor, Treasurer and Commissioner of Public Lands and Buildings, and said board shall appoint five examiners, or secretaries, who shall be skillful apothecaries of seven years' practical experience and actually engaged in said business in the State of Nebraska (p. 5, Sec. 1), and said secretaries shall **assist** said board in conducting all examinations hereinafter provided for," etc. The candidates for secretaryships who are to "assist" the Board of Pharmacy are nominated by the Pharmaceutical Association. The **Delaware** law (Sec. 5) requires that the Pharmaceutical Society recommend to the Governor the names of at least six **graduates in pharmacy** of a college of good standing, and four graduates in medicine, and it shall be the duty of the Governor to appoint three graduates in pharmacy and two graduates in medicine to constitute the Board of Pharmacy.

In **Montana,** of the three members of the board, one must be a graduate in pharmacy; the other two must have not less than ten years' experience (Sec. 4, p. 3).

The terms of service of the board members also differ, ranging from three to six years. In some States one member retires each year and a new one is appointed, while in other States, as in our own, the term of the entire board expires at the same time. In **Mississippi** the law reads that "The Board of Pharmaceutical Examiners is hereby created, to consist of five practicing pharmacists, who shall be appointed by the Governor, and whose term of office shall expire with that of the Governor appointing them" (Sec 3230, p. 1). In the **Territories** laws relating to the practice of pharmacy must be enacted by Congress. In **Indian Territory** the Pharmaceutical Association shall submit to the Chief Justice of the Court of Appeals for that Territory ten or more names of pharmacists of ten years' experience, and the Chief Justice appoints five, each year one vacancy occurring and he appointing the successor to serve for five years. In the **District of Columbia** the pharmacy law is also passed by Congress, but is enforced by the Board of Supervisors of Medicine and Pharmacy. I have been unable to secure data from **Hawaii,** the **Philippines** and **Porto Rico,** but presume the same rule applies as in the Territories.

In some States the pharmacy or poison laws, or certain sections of them, apply only to towns of a certain population, as, for example, Alabama. There the title of the law reads: "An Act to regulate the practice of pharmacy and sale of poisons in towns and cities of one thousand inhabitants." In New York that part of the law regulating the number of hours constituting a day's work applies only to cities of a population of a million or more inhabitants. (N. Y. p. 44.) The **West Virginia** statute reads: "That in any village of not more than 500 inhabitants, where there is no person licensed as a pharmacist within two miles, the board may grant a license to an assistant for that village only, not elsewhere." (Sec. 2, p. 103.)

The State of **Maryland** requires that the members of the **Maryland** Commissioners of Pharmacy shall be skilled and competent pharmacists of ten years' experience who are actively engaged in the retail drug business, and who are **not** connected with any school of pharmacy or medicine either as teachers, instructors or members of the board of trustees. (Sec. 4, p. 2.)

Age

Investigation of the laws of various States reveals the following statistical facts: In every State investigated, without exception, the age requirement of the Registered Assistant Pharmacist was the same, viz: not less than eighteen years. In eight States licentiates were granted certificates at the age of eighteen, while in twenty-two the age required for licentiates was twenty-one. The average age in all States investigated was twenty years and six months.

Experience

Inquiry in forty-two States as to experience produces the following result:

For Licentiate Certificate.—Two States required but two years' drug store experience, Alabama and Wyoming; nineteen States required but three years' drug store experience; nineteen States required but four years' drug store experience; while two States required five years' drug store experience, California and Wisconsin.

For Assistant Certificate.—One State (South Dakota) required but one year's drug store experience; twenty-one States required but two years' drug store experience; while five, including California, required three years' drug store experience.

In two States, New York and Pennsylvania (and possibly Illinois), applicants for licentiate certificates must be graduates of recognized schools of pharmacy. (Bulletin Northwestern University, p. 15.)

Five States and two Territories (viz: Alabama, Arizona, Arkansas, Kansas and Missouri, Oklahoma and Indian Territory) will register graduates of recognized colleges of pharmacy without examination, and five States (viz: Georgia, Iowa, Maine, Nevada and New Hampshire) register graduates without drug store experience. (Bul. N. W. U., p. 15.)

Reciprocity

A number of States interchange certificates with other State, especially those whose Boards of Pharmacy are members of the National Association of Boards of Pharmacy and Pharmaceutical Faculties. The question of interchange of certificates is being agitated extensively, but owing to the fact that the laws of many States will have to be amended to make it possible for the boards to grant such interchange, and also to the difficulty of establishing a uniform standard for examinations, many of the States have not co-operated in the movement.

From the best sources of information the following States and Territories reciprocate: Alabama, Arizona, Arkansas, District of Columbia, Florida, Georgia, Indian Territory, Oklahoma, Louisiana, New Mexico, Maine, Maryland, Massachusetts, Michigan, Oregon, Ohio, South Dakota, Vermont and West Virginia—19 in all.

Preliminary Educational Requirements.

Opinions as to the preliminary educational requirements of an apprentice in pharmacy vary so greatly that an exhaustive article could be written on this subject alone. Did the apprentice of today receive the care and attention from his preceptor as the apprentice of years gone by, it might not be necessary to make the requirements so high, but apprentices are no longer "bound out," nor does the employer's interest, as a rule, extend beyond the point of procuring as much service as possible for the least amount of compensation. A brief quotation from the law of apprenticeship may interest you.

Apprentice

"An apprentice is a minor bound by due form of law to learn some art, trade or business, and when so bound is under obligation to serve the master the time of the apprenticeship. The contract should be signed by the apprentice and his father or legal guardian. The minor cannot be bound for a longer time than until he is of age. Without the consent of the parent or guardian, the contract would not be binding upon the minor. The minor cannot be bound without his consent, which consent should be stated in the contract. It is the master's duty to teach the apprentice the business he is to follow, and if agreed upon, to furnish him with food, clothing and shelter. He has no right to employ him in menial labor not connected with the business he undertook to teach him. The apprentice is under obligation to serve the master faithfully and well; to obey all lawful commands; to guard his master's property and interests, and to faithfully endeavor to learn the business and to perform what is required of him in the contract. His time of apprenticeship comes to an end when he becomes of age, or in case his master dies, at the time of such death, unless otherwise provided for in the contract. The apprentice cannot be compelled to leave the State, nor can he be assigned to any one else." (Century Book of Facts.)

Judging from the very unprepared condition of a large number of the applicants who present themselves for examination, it is unfortunate to realize that the days of the bound apprentice to the apothecary are over. The mutual advantage of such a system to both master and apprentice is so self-evident that I would be a strong advocate of the system of bound apprenticeship, for at least the three years the California law requires a boy to serve before he is eligible for the assistant's examination.

College Prerequisite

The question of a pharmaceutical college course being a prerequisite to eligibility for examination to practice pharmacy is receiving much attention, and in at least two States, and possibly three, it is now required that the applicant for a certificate to practice pharmacy must hold a diploma from a reputable college of pharmacy. While I advocate most strongly that every pharmacist, to acquire a thorough theoretical as well as practical knowledge of his art, should use every endeavor and make every sacrifice to attend a good college of pharmacy, and continue the course until graduation, I do not believe in making the holding of a diploma a legal requirement for licentiate certificate, thus closing the door to many worthy, ambitious and studious but poor boys and girls, who can acquire the knowledge and skill from other sources. Examples are too numerous of competent pharmacists who have never entered a college, and of incompetent ones who hold diplomas for me yet to champion the prerequisite diploma idea.

Board Revenues

I find that the source of revenue for financing the Boards of Pharmacy and enforcing the laws under their jurisdiction is universally the same. Although there has been an effort in one or two States to secure appropriations from the State Treasury, the funds of the boards are derived from fees, permits and fines. Special permits are usually very few in number, and fines are limited, unsatisfactory and distasteful, therefore the principal revenue of all boards must come from fees; largely from reregistration fees. All States require these fees, and the same amounts, viz: one dollar annually for assistants and two dollars for licentiates are the prevailing figures. As these fees give a maximum amount of protection for a minimum amount of expense (the proportion being ridiculously small when considered as a commercial investment, when the law is enforced, as it is in California) they are cheerfully paid by the vast majority of those who derive the benefit therefrom. The constitutionality of requiring this fee was recently tested in Minnesota (the verbiage of whose law in this section is almost identical with California), carried to the Supreme Court of that State, and the requiring of such fee was declared by that court to be absolutely constitutional.

Other Court Decisions

In looking up court decisions in a number of cases on various points where decisions have been rendered that are of direct interest to the pharmacist, I have found, and quote the following:

Druggists Not Liable for Failure to Fill ℞.

"A druggist is not liable to a physician in damages because he once or twice declined to fill the latter's prescriptions for reasons not impugning his capacity." Tarlton v. Lagarde, 46 La.

Proprietor's Liability for Clerk

"One who sustains suffering or injury by taking a poison put up for him by an apothecary's clerk by mistake, instead of the medicine prescribed (in this case croton oil instead of linseed oil) has a right of action against the apothecary." Hanford's Adm'x v. Payne, 74 Ky. 380.

"Where a druggist is sued for mistake of his clerk in putting up a prescription, the plaintiff must show the clerk's want of due care and skill." Beckwith v. Oatman, 43 Hun. 265.

"Where a druggist leaves his business in charge of an employee and is absent from the State, he is liable to one injured by a prescription erroneously compounded by his employee." McCubbin v. Hastings, 27 La. 713.

"The fact that a prescription clerk employed by a druggist is a competent pharmacist does not relieve the druggist from liability for the negligence of the clerk in putting up prescriptions." Burgess v. Simms Drug Co., 86 N. W. 307-54 L. R. A. 364.

"The seller is the one who makes the physical transfer, and an unqualified assistant was held to be liable, although he sold on behalf of his employer, who was registered. The employer would also be liable for injury caused by such sale, notwithstanding conviction of assistant." Wheedon L. R. 24, Q. B. Div. 683, 42 Alb. L. J. 54.

Improper Labeling

"In an action against a druggist for negligence, selling the plaintiff sulphuric acid for sulphuric ether, where the petition alleges that the drug was delivered without labeling 'poison,' as required by the State law, it was proper to instruct the jury that it would be negligence to sell such drug without the required label, without regard to whether plaintiff called for sulphuric acid or sulphuric ether, upon which point there was a conflict of evidence." Fisher v. Gollady, 38 Mo. App. 531.

Proprietor of Patent Medicine Responsible

"When the proprietor of a patent medicine places on a bottle containing it a label recommending it for certain diseases and directing the size of the dose to be taken, and it is shown that the dose contained such a quantity of a certain poison as to injure the patient when he took it, the proprietor is liable for the damage, whether he sold the medicine to the plaintiff directly or to a druggist to be resold, from whom the plaintiff bought it." Blood Balm Co. v. Cooper, 83 Ga. 457, 10 S. E. 118.

Illegibly Written ℞.

"If the prescription of a physician is so illegibly written that a druggist, notwithstanding ordinary care, makes such a mistake in mixing the ingredients as to cause or hasten the death of the patient who partook thereof, the druggist is not liable in damages." McClardy's Adm'x. v. Chandler, 2 Wkly. Law Gaz. 1.

Unlicensed Proprietor Conducting Drug Store

"In a prosecution for carrying on business as a druggist without a license, it was held that the burden of justification under, or proving license, is on the defendant." State v. Horner, 43 S. E. 89.

Delivery of Poison to Minors

"The sale or delivery of dangerous articles to children too young to understand their dangerous nature and unfit to be entrusted with such a substance, will usually render the person who delivers such article liable for any injury which may ensue from such negligent delivery." Carter v. Towne, 98 Mass. 567.

Chinese Selling Opium

"The Appelate Court of the State of Illinois has sustained the State Board of Pharmacy in the case against Yee Way, a Chinese laundryman, prosecuted for selling opium. In handing down the decision the court held:

1. That opium is a drug and not an article of ordinary merchandise.
2. That any place where drugs and medicines are sold is a drug store within the law."

Trade Secrets

"An injunction will be granted to restrain a party from disclosing secrets communicated to him during the course of a confidential employment. A party may be enjoined from using a secret mode of compounding medicines not protected by a patent, when he has acquired the knowledge by a breach of contract or faith on the part of the informant. An injunction will be granted against the use by the seller of a trade secret or secret recipe for manufacturing when the vendor has entered into an agreement not to use the same in his business." Peabody v. Norfolk, 98 Mass.

Practicing Physicians

"A practicing physician cannot keep a drug store or sell or give away drugs which he has not prescribed." State v. Moorman, 86 Mich.; Suffolk County v. Shaw, 21 App. Div. N. Y. 146; State v. Jones, 18 Oreg. 256 22 Pac. 840.

South Carolina—Granting of License Held to Be a Matter of Discretion for the State Board

W. H. Smith, a graduate of the Medical College of South Carolina, Department of Pharmacy, with the degree of Ph. G., applied to the State Board of Pharmaceutical Examiners for a license to practice pharmacy and his application was refused. A writ of mandamus was then applied for to compel the board to issue the license. The only question before the court for consideration, upon an agreed statement of facts, was whether or not the board could investigate the standing of a school and if in its opinion the school was not a reputable one, refuse the license. The Supreme Court of South Carolina held that the board has this discretionary power and that its duties are not plain ministerial duties. The court in refusing to grant Smith the relief prayed for said that its action was not intended to reflect in any manner upon the medical college of South Carolina. State ex rel. Smith v. Matthews et al., 57 S.E. (S. C.) 1099.

I cannot bring this paper to a close without presenting one more thought for your consideration, and that is with reference to legislation. Doubtless in the future this organization, like similar bodies of our sister States, will have much to do with pharmaceutical legislation. Having had considerable experience in legislative matters, let me urge you not to lay dormant until the emergency arises, and then send a hasty letter or wire to the representative of your district requesting him to advocate or oppose a certain bill or bills before the legislature.

How many of us are personally acquainted with our Senators or Assemblymen? If not, how can we expect a letter or wire to have very much effect when there are representatives on the ground using the weight of their personal influence to defeat our object. If we are indifferent about our civic duties, then let us not find fault when laws are placed on the statute books not to our liking. The most important thing to do, and that which I most strongly advocate and emphatically urge, is for the druggists of the State, instead of fighting over time-worn topics, to "let the dead past bury its dead" and be "one of the living present"; arouse ourselves to action, and wherever possible over the State urge the nomination and election of a pharmacist to the legislature. There are men there of nearly every calling. In the last legislature there were five physicians, and these physicians are invariably on the committees to which pharmaceutical legislation is referred. Where interests conflict, will they be impartial; or will they be biased in favor of their own profession? Experience leads me to the latter belief. We are simply at their mercy without a single pharmacist in the whole body to raise his voice in our defense. Therefore, I reiterate, and repeat it with all the emphasis in my power, elect true representatives of pharmacy to the legislature to stand up and fight for legislation that will not only protect the people of the State, but will also help the pharmacist (he who receives, not only relatively but absolutely the poorest compensation of all the professions), to raise the standard of his art, and elevate him in the community in which he is always one of the most respected members.

WASHINGTON ANGELS OF PURITY

By Albert Schneider.

It was predicted in a previous number of **The Pacific Pharmacist** (June, 1907) that the troubles arising out of the Pure Food and Drug Law would come thick and fast for a time. The prediction has certainly come true. Already the Department of Agriculture has succeeded in making many fast and furious enemies and not a few lukewarm friends, who acclaim the work with a faint, half-hearted hurrah. The fact that the Department has made more enemies than friends may be a sign of efficient efforts in behalf of pure food and pure drugs, but this does not necessarily follow. There can be no doubt that the Department, through its agents, has acted in a somewhat overbearing and high-handed manner. Rulings have been made without due investigation, and often at long range. A ruling abstractly evolved in an office at Washington may not be wholly just to the actual conditions in the fields and factories in far-off Oregon and California. It is also a fact that a ruling which might be wholly just and equitable in England or some other foreign country would not be just in the United States. The rather arrogant attitude of the Department is clearly set forth in the sentence by the Secretary of Agriculture, which reads as follows: "It is clear that if manufacturers, jobbers and dealers interpret the rules and regulations in the same manner as they are interpreted by this Department, no prosecution will lie against them." Such a statement is wholly uncalled for. It may be assumed that all honest individuals and corporations will seek to conform to the rulings of the Department.

OINTMENTS, OINTMENT BASES AND CASEIN CREAMS

By Harry D. Morgan, Ph. C.*

Ointments

The subject of ointments is one well worked, but, like plowing a well-cultivated field, you're bound to turn some new soil.

Here are quoted a few lines from authorities as to what an ointment should be:

Oldberg says: "Ointments are usually soft, solid, fatty mixtures having a melting point near the temperature of the body."

U. S. Dispensatory says: "These are fatty substances, softer than cerates, of a consistence like that of butter, and such that they may be readily applied to the skin by inunction."

National Dispensatory says: "Ointments are unctuous preparations of such consistence as to permit their being applied to the skin by friction or inunction."

These are quoted to give an idea of what we are to expect. When a man buys a house his first thought is not how is it made, but what does it look like, and how useful. To the builder the first thought is, how is it made? Just so with the pharmacist—how is it made?

It was found that in many cases, especially where several ingredients entered into the mixture, the conditions surrounding the manufacture govern the product.

The various purposes to which it is to be used also give a different ointment.

An ointment may be for lubrication and not intended for absorption. In this case some substance is wanted that will fill the tissues, softening the surface and yet one that is not readily absorbed. The cerates come under this head, as do the creams and salves made from the hydrocarbons.

Under this head ten experiments were carried on with the hydrocarbon oils and mixtures of paraffin and small amounts of white (bees') wax and water. Then mixtures of paraffin oil, spermaceti, paraffin and a small amount of lanolin gave the best result and absorbed the most aqueous solutions. Alpers' formula gives a very beautiful snow-white cream, if directions are strictly followed, not unlike in appearance zinc oxid ointment.

It was found that, withal, these ointments, while possessing properties such as whiteness, freeness from rancidity, not being easily oxidized and cheap, yet melt at too low a temperature. If sufficient wax be added to prevent their going immediately into liquefaction, they are too firm. When this too-firm ointment is rubbed onto the skin, it at first is firm, then all at once melts without giving chance for massage.

Ointments may be wanted for absorption when ointments of lard, wool fat, cocoanut oil, oil of theobroma, tallow, suet, rosin, and waxes come into use. Ointments of this class may be used for local or systemic medication, as in the instance of rosin ointment for local, while in the inunction of mercury ointments the mercury is absorbed and passes into the system.

It was found that for an ointment of this kind, suet, wool-fat and lard in equal parts gave best results and proved not to be too expensive. This was found to keep fairly well, both in heat and cold, and to take very well to metallic substances—bismuth, mercury and zinc.

Five experiments were carried on with substances that could be used as bases without having to be heated.

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* These experiments were conducted in the Pharmaceutical Laboratory of the California College of Pharmacy.

Ointment Bases—Cold

No. 1

Lanae adipis	1
Adeps	2

Good for aqueous solutions.

No. 2

Lanolin	1
Adeps	2

Good; readily absorbed.

No. 3

Petrolat alba	1
Adeps	2

Lubricant; not absorbed.

No. 4

Petrolatum	1
Adeps	2

Good; not absorbed.

No. 5

Suet	1
Adeps	2

Readily absorbed.

The combination of suet and lard gives one of the best. This, of course, is not a good keeper and cannot be used with readily oxidized substances. White petrolatum and lard made a beautiful ointment in the combination of one part white petrolatum and two parts lard.

Where aqueous solutions are to be incorporated, the combination of wool fat one part and lard two parts gives splendid results. This base is easily rubbed into the tissues.

Five bases were made by the agency of heat.

Bases Made by Heat

No. 6

Cera alba	1
Adeps	2

Too hard.

No. 7

Cera flav.	1
Adeps	2

Too hard.

No. 8

Spermaceti	1
Adeps	2

Too crystalline.

No. 9

Resin	1
Adeps	2

Dark; good appearance; protective.

No. 10

Paraffin	1
Adeps	2

Good; firm; white.

Ointment Creams

Inasmuch as so-called "cold creams" are often used for bases for the application of sulphur, zinc oxid and mercury salts, it is well to consider these mixtures of organic and inorganic fats with water.

Take first our Ung. Aquæ Rosæ, too well known to give the formula. It is not a good keeper, and unless made from true oil of sweet almonds soon becomes rancid. This ointment is rarely found anywhere but on the prescription case, for the same reason.

Here is an ointment of water and fats which has been found to keep very well. A sample has been kept as long as three years and did not dry out nor spoil:

Spermaceti	9.0
White wax	9.0
Oil peach kernels	52.0
Po. borax	4.0
Water	35.0

Mix; sec. art. et ft. ung.

It was found that in all these ointments that it is best to have the fats at the lowest possible melting point and the water at the same temperature.

As is noticed, this cream contains 33⅓ per cent water. Water materially cheapens this article without one having to "accept" the hydrocarbons.

These ointments may be considered from two points of view, since they take considerable attention of the trade:

First—As bases for local application.

Second—As cosmetics—skin foods and emollients.

Four experiments were carried out with Unguentum Aquæ—made entirely from organic fats and oils.

Ointment Bases — Heat

Addition of Water.

No. 11

Ung. aquæ rosæ U. S. P.

Good appearance; does not keep well; good for Z. O., bism., etc.

No. 12

Spermaceti	9.0
White wax	9.0
Oil peach kernels	52.0
Po. borax	0.4
Water	35.0

Good keeper, white, cheap.

No. 13

Spermaceti	1.5
White wax	1.5
Oil sweet almonds	6.0
Lanolin	3.0
Cocoanut oil	3.0
Tr. benzoin	0.2
Orange flower water	3.0

Nice looking, good odor, makes good skin food, readily oxidizes, turns yellow on exposure, due to lanolin.

No. 14

Oil theobroma	3.0
Oil olive	4.0
Borax po.	0.06
Water	1.5
White wax	0.2

Makes a good skin food; a good keeper.

This ointment ordinarily has an off color, due to the presence of the two colored oils, but it is found that upon beating it well it becomes very white.

The more stirring that is done, the whiter and fluffier will be the product.

First take the Ung. Aquæ Rosæ of the U. S. P. When properly made it is a beautiful preparation. But how long does it keep, say in the summer time? For the purpose of dispensing ammoniated mercury, etc., it is first-class. But when it comes to putting out a cosmetic, I'm afraid we turn to something more profitable. Peach kernel oil is cheaper by far, and for creams that are rapidly used up it is found it serves equally well.

Take the combination of peach kernel oil, white wax, spermaceti, with 33⅓ water. It makes a white and firm ointment that is inexpensive and a very good keeper.

Peach kernel oil, spermaceti, white wax, lanolin, cocoanut oil with water puts up a splendid skin food that could be combined with solution of resorcin as an antiseptic skin food, but it is only good while fresh, as the lanolin readily oxidizes and the outside becomes yellowish and rancid with the development of esters.

A good simple skin food is the oil of theobroma, oil olive, white wax and water combination—is a good keeper. Though a trifle hard, yet one readily melted by the warmth of the fingers.

Since the Ung. Aquæ Rosæ is looked upon as too costly as a stock cream, a great deal of thought has been given by many able chemists and pharmacists with the endeavor to furnish a product at materially less cost and yet remain a worthy substitute for the U. S. P. article. At last the hydrocarbon oils and fats—petrolatum, petrolatum oil, paraffin—were forced into service.

Ten formulæ were chosen and worked upon. One original formula was worked out and is here presented.

These are mixtures of organic and inorganic fats and oils.

Ointment Bases — Heat

Organic and Inorganic Fats and Oils with Water

No. 15

Paraffin	9.0
Spermaceti	4.5
Petrol oil	18.0
Borax po.	1.2
Water	18.0

Not very good; too soft.

No. 16

Paraffin	9.0
Spermaceti	6.0
Petrol oil	18.0
Borax	1.2
Water	18.0

Too soft.

No. 17

Paraffin	2.5
Spermaceti	2.0
Vaseline oil wht.	5.0
Water	2.5

Not good.

No. 18

Paraffin	2.5
Spermaceti	2.0
Vaseline oil wht.	5.0
Lanolin	1.0
Water	2.5

Fairly good.

No. 19

Paraffin	2.5
Spermaceti	2.0
Vaseline oil wht.	5.0
Lanolin	0.5
Water	2.5

Good appearance; fairly good keeper.

No. 20

Paraffin	10.0
Glymol	30.0
Borax po.	0.6
Water	20.0

Too soft; not very good.

No. 21

White wax	1.5
Paraffin oil	6.0
Borax po.	0.09
Water	2.4

Alpers'; white, creamy, looks like Z. O. oint.

No. 22

Paraffin	2.5
White wax	2.6
Paraffin oil	9.9
Sod bor	0.1
Water	3.8

Very good.

No. 23

White wax	1.0
Paraffin	1.0
White paraffin oil	5.4
Oil theobroma	0.4
Borax po.	0.1
Water	2.0

Good.

No. 24

White wax	1.0
Paraffin oil	5.0
Borax po.	0.1
Water	2.0

No good.

No. 25

White wax	1.0
White petrolatum	6.0
Borax po.	0.1
Water	2.0

Original; a little firm; very white and smooth.

The whiteness and beauty, together with the keeping properties of Alpers' formula, make it an especially valuable cream.

The modus operandi has been omitted from all of these, as it is supposed that any pharmacist can make an ointment of this kind if he has the formula.

A splendid ointment—taking the side of the use as a cosmetic—is the one of the white wax, paraffin, white paraffin oil, oil of theobroma and water. It seems as though the more you beat this and stir it the better the cream—it fluffs up and is creamy. This formula was taken from the **Spatula**.

The original formula added is the one in which white wax, white petrolatum, borax and water are used. It comes out beautifully white and fluffy. It is surely a good keeper and can be used with any substance as a vehicle—is easily made and not readily decomposed.

The saponification of oil of theobroma and other fats was tried as ointment bases, but without success.

A pink color often helps a cosmetic. Alkanet root gives up its color to oil, so that this may be used.

Odors of any kind may be added. It was found that the addition of a little oil of cassia to the cream will help kill the grease odor and is rather a benefit.

Casein Creams

The casein creams, while not used for vehicles, yet play an important part in the cosmetic trade of today.

Many processes are found for the manufacture of these preparations.

Experiments took place on six formulæ taken from reports, and one original was added.

Casein Creams

No. 26

Milk, skimmed	480.0
Po. borax	2.0
Boric acid	3.0
Alum po.	8.0
Carmine sol.	
Perfume	each q. s.

Dissolve the borax, acid, alum, coloring and perfume in some water. Add to the milk; place on a fire; do not burn or scald. After settling, strain; squeeze out most of the water. Beat up till smooth.

Nice, but a tendency to be granular; dries too readily. 100 gms. obtained from this quantity.

No. 27

Milk, skimmed	480.0
Po. alum	12.0
Boric acid	8.0
Po. borax	12.0
Phenol	3 gtt.
Carmine sol.	
Perfume	each q. s.
Water	q. s.

Heat milk to 130 F. Add alum to 1 ounce water, heat to same temp.; acid and borax to 2½ ounces water and apply same temp.; mix milk and boric sol. while warm and add the alum sol. while warm. When milk has curdled, strain; if not clear add more alum sol. When all casein has been gathered, add phenol, oils and carmine sol. to tint.

Nice, flakey; probably best keeper. 115 gms. obtained.

No. 28

Milk, skimmed	480.0
Hydrochloric acid	4.0
Boric acid	4.0
Oil sweet almonds	2.0
Carmine sol.	
Perfume	each q. s.
Water	qs

To milk add equal vol. of hot water to bring to 80 F. Mix HCL with 2 ounces water, add to diluted milk slowly to obtain casein in finely divided form. Let stand for one hour, then strain. Wash the casein with 32 ounces water to free from acid. Break up lumps and strain and squeeze out all the water possible. In mortar beat the casein, boric acid, swt. almond oil and perfume. If too dry, stir up with dilute alcohol to moisten; beat into smooth paste and bottle or put in tubes. Dries rapidly.

No results. 15 gms. of product obtained.

No. 29

Milk, skimmed	480.0
Ammonia water	4.0
Acetic acid	4.0
Perfume	qs
Carmine sol.	q. s.
Cold cream	equal weight

Add ammonia water to milk; let stand 24 hours. Add acid; let stand another 24 hours. Strain and add oils. Work in mortar, add carmine sol. and the cold cream; beat all well till creamy.

No success. 2 gms. obtained.

No. 30

Milk, skimmed	480.0
Tartaric acid	15.0
Borax po.	2.0
Zinc oxid	4.0
Glycerin	8.0
Carmine sol.	
Perfume	aa q. s.

Dissolve acid in 4 oz. water, add to milk. Strain. Rub Z. O. in glycerin till smooth, then rub in casein, perf. and color.

Original. 102 gms. obtained.

As you see, two are made by the use of alum to precipitate the casein, one by hydrochloric acid, one by acetic acid and one by tartaric acid.

Since cost is to be figured in two ways, we will consider both actual cost and the amount of product obtained.

The seven creams were made from the same lot of skimmed milk and under the same conditions.

It will be seen that No. 27 furnished 115 gms. of casein base from the 480 cc. of milk. This was a beautiful cream, but apt to dry out and become too granular. Even the addition of a bland oil like the oil of sweet almonds will not prevent these creams from drying out. At the same time they present a greasy feeling to the touch when oil is added.

My conclusion was that something must be added to prevent this rapid drying.

As you see by No. 30, a small amount of glycerin and zinc oxid was added. This cream, to my notion, is well worth putting up as one's own preparation. From 480 cc. of skimmed milk, 102 gms. of finished product ready to bottle was obtained.

As to the keeping of these casein creams, I should judge them not to be very good keepers, but the ones just made are too fresh for me to say for certain. At any rate I believe the addition of some antiseptic would materially assist in their preservation.

COUGH REMEDIES

By Albert Schneider

The season for cough syrups is now on. Their use is universal. Some are useful and some are not. Some are given when such a remedy is indicated and some are not. Some have curative or alleviative properties and some have not.

There are numerous kinds of coughs. The most common is the bronchial cough, due to an irritation or inflammatory condition (acute or chronic) of the bronchial passages. The cough due to pneumonitis, tuberculosis of lungs and bronchi, and other grave conditions, will not be discussed here, as they come under the care of the physician. It is rather the simple bronchial cough, unattended by any marked systemic disturbance, which is here referred to in connection with cough remedies. Such coughs will continue to be treated by home remedies and by the remedies prepared by and kept for sale by the pharmacist. The home remedies are numerous, the most popular containing honey, syrup, sugar, fried onions, wild cherry bark, licorice and brandy or whisky. The "patent" cough remedies are innumerable, and contain for the most part some opium derivative, some diuretic and perhaps a laxative.

This may also be said in a general way of the preparations made by the pharmacists.

A cough indicating an inflammatory bronchial condition is usually accompanied by more or less systemic disturbance. The local disturbance in the throat may be the direct cause of the act of coughing, but it is the systemic condition which maintains the coughing.

The ideal cough remedy for a simple bronchial cough should accomplish the following things:

1. **Allay or relieve the local irritation in the throat, and the slight general nervousness.**
2. **Increase the action of the skin.**
3. **Increase the action of the kidneys.**
4. **Increase the action of the bowels.**

In other words, the cough remedy should contain an emollient, an anodyne, a diaphoretic, a diuretic and a laxative, combined in simplest manner possible. Numerous cough remedies are made which claim to meet these conditions or requirements, though differing in the ingredients used. Brown mixture of the U. S. P. meets the requirements very closely. It contains extract of licorice (emollient), paregoric (anodyne), sweet spirits of nitre (diuretic), and wine of antimony (expectorant and diaphoretic). The following bulk formula is taken from the Practical Druggist and meets the specified conditions. The principal objections are its complexity, neither is it very pleasant to take:

Heroin hydrochloride	16 grs.
Benzoic acid	2 drs.
Chloroform	6 "
Oil sassafras	1 "
F. E. Ipecac	6 "
F. E. tolu (N. F. soluble)	4 ozs.
F. E. sanguinaria	4 drs.
Glycerin	4 ozs.
Tar water, saturated	16 "
Alcohol	16 "
Sugar	4 lbs.
Distilled water, q. s.	1 gal.

Dissolve the benzoic acid and oil in the alcohol, and add the remaining ingredients, except heroin, sugar and chloroform together with two pints of water. Let stand a week, with occasional shaking, and filter clear. Add the chloroform to the sugar in a percolator and dissolve it by percolating the filtrate through it. Make up to one gallon with water, in which the heroin has been dissolved. Dose, a teaspoonful every two to four hours.

The "baby" cough syrup contains no opiates, and has proven very effective.

Syr. ipecac	½ oz.
Syr. squills	½ "
Syr. senega	½ "
Syr. wild cherry	1 "
Syr. simp.	4 "

(Made from brown sugar.)

M. Sig.: From 1-3 to 1 teaspoonful according to age.

Many other combinations could be made. It must be borne in mind that, since most cough remedies are intended for children, they must be made pleasant to take, calling for the liberal use of syrups and licorice. It is, of course, also desirable that the combination should have an elegant appearance, and that the ingredients should be soluble.

Opiates should never be the chief ingredient of a cough remedy. They allay the coughing, no doubt, but they have no curative properties, and they are furthermore objectionable and dangerous because they hide the real trouble and permit it to develop.

The innumerable "cough drops" on the market have a local effect only, though some of the "grip" and cold tablets fulfill the requirements named.

It is, of course, always to be urged that a physician be consulted in the case of coughs, but since a cough remedy is insisted upon without consulting a physician, the best possible should be supplied.

Diphtheria Antitoxin in Hay Fever and Asthma.—Reuter (Proceedings of the Oregon State Medical Association).—The author used antitoxin in sixty cases of hay fever and asthma in repeated doses of 2,000 to 3,000 units. Fifty-one patients were cured; fifteen cases caused by diseases of the heart, kidney or liver, and tuberculosis, were not benefited; four other cases were only temporarily relieved. Smith used antitoxin in several cases and believes that 60 per cent of asthmatics can be benefited. He believes that when failure occurs with this treatment it is due to emphysema and other destructive processes of the lung. Gillespie reports good results in two cases. Pierce used it in twelve cases with more or less success. He thought most relief was gained in neurotic cases of asthma with anemia.—Interstate Med. Journal.

California Wine

This is one of the products which is helping to make California famous. It is more than probable that the wine industry of California will become more important in the future. The Irrigated Farms Company recently let a contract for the planting of 5,000 acres in wine grapes on the company's land near Kerman.

MEDICINAL AND POISONOUS PLANTS OF CALIFORNIA

By Albert Schneider, Ph. D.
Professor Economic Pharmaceutical Botany, Histology and Bacteriology in the California College of Pharmacy.

175. **Brunella vulgaris** L. Self-heal. Heal-all. Labitæ.

A cosmopolitan plant of European origin. Said to be useful as a gargle in throat diseases; useful in diarrhea and to check hemorrhages. It was highly prized among the common people of Europe.

176. **Bryonia alba** L. Cucurbitaceæ.

Introduced in garden. Thrives well. Well known medicinally. (See textbooks and dispensatories.)

177. **Butneria occidentalis** Greene. Western spice bush. Butneriaceæ.

All parts very aromatic. Requires further study.

178. **Buxus sempervirens** L. Common box tree. Euphorbiaceæ.

An extensively cultivated evergreen shrub, native of Europe and western Asia. The wood is said to have diaphoretic properties, and a decoction is used in the treatment of rheumatism and secondary syphilis. The leaves are purgative. The volatile oil is given in epilepsy. (U. S. Disp.)

179. **Cactus** species. Cactaceæ.

There are several Mexican cacti which are said to be powerful heart stimulants. **(Anhalonium lewini.)** (See also **Opuntia** and **Cereus.**) (Baily, Cycl. Am. Hort. 203.)

180. **Caffea arabica** L. Coffee. Rubiaceæ.

Found in conservatories and thrives in southern portions of the State. Not cultivated commercially. Seeds contain caffeine.

181. **Calandrinia caulescens menziesii Gray.** Wild portulacca. Portulaccaceæ.

A fodder plant. Considered an excellent pot-herb, used for salads, etc.

182. **Calendula officinalis** L. Marigold. Compositæ.

Other species and varieties common in gardens. Well-known medicinal plant. Used as a poultice in cancer, ulcers; given in scrofula, jaundice, colic, etc. (U. S. Disp.)

183. **Callitriche palustris** L. Water fennel. Water starwort. Callitrichaceæ.

A decoction is given for dropsy and in urinary affections.

184. **Calochortus macrocarpus** Dougl. Mariposa lily. Liliaceæ.

The bulbs are greatly relished by Indians, eaten raw. All relish it, children especially. This is unquestionably the most highly prized bulb known to Indians. Indians claim that the juice of **Calochortus concolor** Purdy is bad for the eyes (Hall). The bulbs of **Calochortus nutallii** are also used as food by Indians. Resembles the Death Camas somewhat.

185. **Calumba. Menispermaceæ.**

This plant thrives well. Well-known medicinally. (B. R. Nichols, Calif. College Pharm. 1902. Thesis.)

186. **Camassia esculenta** Lindl. Wild hyacinth. Liliaceæ.

A popular food of the Piute Indians, the bulbs are eaten. (Calif. Geol. Surv. Bot. II: 158.)

187. **Camassia (Quamasia) leichtinii** Baker. Camas. Liliaceæ.

A very important Indian food plant. The bulbs are eaten raw and baked. **Quamasia quamash,** Death Camas, is very poisonous.

188. **Camelina sativa** L. False flax. Cruciferæ.

Introduced weed. Once grown commercially for the oil in the seeds.

189. **Cananga (Unona, Uvaria, Canang.) odorata** H. & T. Ylang-ylang. Ononaceæ.

A cultivated native of China. Yields an odorous essential oil.

190. **Cannabis sativa** L. Indian hemp. Urticaceæ.

Escaped from cultivation. The exact medicinal value of the California-grown plants requires further careful study. Extensively grown as a fiber plant in Butte County, Calif.

191. **Capsicum baccatum.** Bird pepper. Solanaceæ.

Easily grown. Supplies the bulk of the cayenne pepper of the market. The name bird pepper refers to the fact that turkeys are very fond of the fruit. Used as a stimulant tonic in atonic dyspepsia.

192. **Capsicum fastigiatum.** Red pepper. (Cayenne or African Pepper.) Solanaceæ.

This is a common California product. (C. E. Phœnix and E. May, and A. L. Raney, Calif. College Pharm. 1903. Thesis.)

193. **Carica papaya.** Paw Paw. Passifloraceæ.

A common introduced plant. Grown as an ornamental plant, and for the fruit in southern California. The fruit contains a ferment papain, which acts on starch, emulsifies fat and converts albuminoids into peptones. Of great commercial interest.

194. **Carica quercifolia.** Paw Paw. Passifloraceæ.

Leaves contain high percentage of papain, which is much used as a substitute for pepsin. For fermentative action of juice, see Proc. A. Ph. A. XXVII: 231. 1879.

195. **Carob.** (See Ceratomia.)

196. **Carthamus tinctorius** L. American, false or dyer's Saffron. Compositæ.

Cultivated in various parts of the United States. Native of India and Africa. Used as an adulterant of or as a substitute for true or Spanish saffron, as a domestic diaphoretic, laxative in measles, in scarlatina and other eruptive diseases.

197. **Carum gairdneri** Gray. Wild caraway. Umbelliferæ.

Poisonous. Used by Indians. (Palmer.) (Proc. A. Ph. A. XXVII: 193, 1879.)

198. **Carya (Hicoria)** species. Hickory. Juglandaceæ.

To this group belong the pecan and the various hickories. No systematic attempts have as yet been made to introduce these into the State. Bark and leaves astringent, used in dyspepsia and intermittent fever. Leaves of **C. porcina** and of other species used medicinally as a laxative and for external application in skin diseases. The bark used in dyeing brown, yellow and green.

199. **Cascara.** (See Rhamnus.)

200. **Casimiroa edulis** L. White zapote. Rutaceæ.

Used as a hypnotic in Mexican hospitals. The seeds are used. Introduced in southern part of State.

201. **Cassia acutifolia** Del. African Senna. Leguminosæ.

According to H. H. Fisher **(in lit)**, Senna has been grown successfully near Corpus Christi, Texas, for several years. Seeds obtained from Mr. Fisher have been planted in the San Francisco Garden of Medicinal Plants; they germinated promptly, but the seedlings were killed by root rot. Attempts to grow it at Salinas, Calif., met with partial success only. Further culture attempts will be made. (First, An. Rep. S. F, Garden of Med. Plants, Library, Calif. College Pharm.)

202. **Cassia marylandica** L. American Senna. Leguminosæ.

This plant is common in the gardens and parks of California. Used as a cathartic like senna.

203. **Castanea chrysophylla** Dougl. Chestnut. Chinquapin. Cupuliferæ.

Varies in size from a shrub to a large tree, 150 ft. high. Seeds edible. The fruit is good, but is now superseded by that of the Japanese chestnuts. (Contrib. U. S. Natl. Herb. VII: No. III, 333.)

204. **Catalpa catalpa** Karst. Catalpa. Bignoniaceæ.

Introduced as ornamental trees. The seeds have been found useful in asthma.

205. **Caucalis microcarpa** Hook et Arn. Hedge parsley. Umbelliferæ.

A poultice of this plant is used to counteract rattlesnake bites. (Calif. Geol. Surv. I: 272.) (U. of C. Agr. Exp. Sta. Rep., p. 244, 1890.)

206. **Caucalia nodosa.** Umbelliferæ.

This is also known as a rattlesnake remedy. The species require further study as to their reputed properties.

207. **Ceanothus americanus** L. New Jersey tea. Rhamnaceæ.

Cultivated. Roots rich in tannin. Leaves used as a substitute for tea.

208. **Ceanothus cuneatus** Nutt. Lilac. Rhamnaceæ.

Native plant, which should be more carefully studied.

209. **Ceanothus divaricatus** Nutt. Soap bush. Rhamnaceæ.

The blossoms are used as a substitute for soap. (Calif. Geol. Surv. Bot., II; 439.)

210. **Ceanothus integerrimus** H. & A. Lilac. Rhamnaceæ.

Seeds eaten by Indians. Bark and roots of this shrub used in malaria, catarrh and liver trouble. Good forage plant. Fruiting capsule very bitter and should be studied more carefully as to possible medical properties.

211. **Ceanothus velutinus** Dougl. Mountain balm. Snow brush. Manzanita. Rhamnaceæ.

The old Indians boil the leaves, dry them and smoke them like tobacco. Also employed medicinally, but no definite information could be obtained as to how; perhaps it was used as a tonic. The Indians appear to be quite enthusiastic about it, and pronounce it "very good medicine." Very likely used much like **C. americanus,** which owes its properties to the presence of tannic acid and an alkaloid ceanothine. (U. S. D.)

212. **Centaurea solstitialis** L. St. Barnaby's thistle. Yellow star thistle. Compositæ.

The mature plant is said to be poisonous to horses and cattle. Becoming a very troublesome weed. Cut green it is said to make good fodder. Introduced from Europe. Requires further study.

213. **Cephalanthus accidentalis** L. Button willow. Rubiaceæ.

A tincture made of the bark has been found useful as a tonic, as a laxative and as a remedy for fevers and coughs.

214. **Cerasus demissa** Nutt. Choke cherry. (Amygdalaceæ.) Rosaceæ.

Fruits eaten fresh or dried. Green as well as nearly ripe fruit is very astringent. Inner bark gathered in large quantities for medicinal use. Said to be useful as a tonic, to check diarrhea and to relieve nervousness. The fresh berries are ground (crushed) up entire in a stone mortar and pestle. The dried fruit pulp is boiled and eaten. A decoction of the young shoots and bark is taken apparently as a beverage (coffee). Root is used medicinally. (Contrib. U. S. Natl. Herb. VII: No. III, 356.)

215. **Cerasus emarginata** Dougl. (Amygdalaceæ.) Rosaceæ.

Used much like **C. demissa.** Fruit quite bitter and somewhat astringent. Perhaps used because of the medicinal effects due to hydrocyanic acid; perhaps tonic.

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PRACTICAL EXPERIENCE IN DISPENSING

By J. Leon Lascoff*

In dispensing prescriptions, in my long experience, I noticed that the same mixture or the same salve dispensed by different pharmacists according to physician's order will often look different. This is partly due to carelessness in washing out the utensils or not using clean spatulas, and partly to putting up the prescription beginning with the first ingredient and following up to the last (the way the doctor wrote it), not thinking that some chemicals will not mix with the others, or some chemical change will take place. I had a good many examples, but will write as shortly as possible and put on a very few. We will begin with the mixtures:

1.	℞	Potass. Iodid.	2 drachms
		Spir. Ether. Nitros.	1 ounce
		Liq. Ammon. Acetatis	2 "
		Kalii Citri.	1 drachm
		Aq. q. s. ad.	6 ounces

If it be dispensed the way the doctor wrote the prescription it will turn out a reddish colored mixture, but when dispensed by dissolving the Kalii Citr. in Aqua, adding Liq. Ammon. Acetat., then adding the Spir. Ether Nitros, dissolving the Pot. Iodid. in water and mixing both solutions, it will be a nice clear mixture.

2.	℞	Zinc. Sulph.	½ ounce
		Potass. Sulphurat.	½ "
		Aq. Rosæ	6 "
		Sig. Use externally.	

This lotion is known as lotio alba. If properly put up it must be white, otherwise it is a grayish color. The best way to dispense this prescription is to dissolve the sulphate of zinc in three ounces of rose water and filter, then rub up thoroughly the Potass. Sulphide in a mortar (care must be taken that the mortar is clean) with 3 ounces rose water and filter, then mix gradually both solutions in a mortar and triturate until it forms a white mixture.

3. Very often we have had prescriptions for Zinc Sulphate and Plumbi Acetat. and water. The best way is to make a solution of Sulphate of Zinc and add a little Mucilage of Acacia, then a solution of Plumbi Acetat., and add a little Mucilage Gum Arabic, then mix both solutions together, and it will keep better and the patient will have better results; also it could be better used with syringe for injection, for there will be no precipitate.

4. In making a solution of Zinc Chloride it never turns out a clear solution, but by adding a few drops acid mur. dil. you will get a nice, clear solution.

5. In making an emulsion of Creosotal (or Creosote Carbonate) sometimes the emulsion gets a reddish color. This prescription was brought back, and I put up a new one and it was perfect. The third time it was a reddish color again. The same experience I learned several of my friend pharmacists had. After a few experiments with the Creosotal Emulsion I found that in making the emulsion of Ol. Amygdal. Dulcis first (adding as much Ol. Amygdal. Dulcis as Creosotal) and then adding the Creosotal, the mixture will keep better and there will be no precipitate, as there would be in emulsion Creosotal without the Ol. Amygdal. Dulcis.

6. In making Ungt. Diachlylon, the salve is usually a brownish color and hard. The same salve could be made white and soft if put up in the following way: Melt the lead plaster with the Olive Oil, strain and put in a clean mortar, rub well, **add a few drops of water,** then add the Oil Lavender, and it will turn a nice, white, soft salve.

7. In eye-salves, when Yellow

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* Read at the meeting of the American Pharmaceutical Association, 1907.

Oxid of Mercury or Red Oxid of Mercury is prescribed, it is advisable to use a chemical of a reputable house, for it is much finer, and when prescribed with Vaseline it is advisable to use Vaseline from tubes, for it is more sterile. We must keep in mind that it is to be used for granulated eyelids, and the salve for such use should be thoroughly clean and uniform.

8.	Ol. Amygdal. Dulc.	4 oz.
	Spermacet.	1 "
	Cera Alba.	1 "
	Cucumber Juice	2 "
	M. f. Cream.	

It is very difficult to make a nice cream, for it will be too watery, but by adding 15 or 20 drops Liq. Albolene and rubbing thoroughly in the mortar, it turns out perfect and soft. A few drops of Albolene should always be added to a salve where some watery solution like Sol. Adrenaline Chloride or Rose Water and Lanoline is prescribed, as Albolene assists to make an emulsion.

Besides the thousand different ready-made tablets which are at present on the market, very often we have special tablets to make, either triturates or compressed.

The triturate tablets are not always easy to make in tablet mould if we do not use the right solution or excepient. In making tablets of Codeine pure we must use a solution in alcohol and water, more water than alcohol, because the Codeine pure is very soluble in the alcohol. In making tablets Codeine Sulphate a solution containing more alcohol than water must be used. In making tablets Calomel and Soda, pure alcohol only is advisable, even **absolute alcohol,** else the tablets will turn black.

In making tablet triturates containing extracts like Ergot (½ grain), Ether must be used; otherwise a pill mass will be formed and we will never be able to take the tablets out of the mould.

To make tablets compressed **ex tempore,** like Lithium Benzoate 7 gr. (I had very often prescriptions for same) or Sodium Sulphocarbolate 4 gr., we must rub up the ingredients called for in a mortar with Mucilage of Acacia, granulate through a coarse mass sieve, let it dry and compress on the tablet machine. The idea of granulating a chemical is that it should not stick to the mould, and the tablets should all be uniform and have the right weight.

College vice Apprenticeship

At the last annual meeting of the Colorado Pharmaceutical Association a paper was read on Pharmaceutical Education by Dr. Davison. In the discussion which followed, Mr. Ford said:

> We ought to have more colleges of pharmacy. We ought to have one in Colorado. It would be well patronized, and would be one way of remedying the present shortage of clerks. A man cannot go into the drug business now and learn it in the store. No one who can look back over a period of 10 or 12 years but who knows there is not a drug store in the State of Colorado where one could go in and learn anything about pharmacy, because it is not practiced in detail so that a boy could learn it. Time was when a boy could be taken into a drug store where pharmacy was practiced in detail, and, if he had a competent preceptor, he could within a few years become a most excellent pharmacist. But that time is past, and those opportunities are no more. What the boy has to have now is a school of pharmacy. Then, after he is out of school and receives the practical experience in a store, he is of value.

The question of popularizing the U. S. P. and N. F. received earnest consideration.

The next meeting is to be held at Glenwood Springs again.

Scientific Notes

THE ULTRA-MICROSCOPE AND ULTRA-MICRO-ORGANISMS

Much has been said and written about the ultra-microscope, which has been made known through the efforts of Siedentopf and others. By means of this instrument it was thought to be possible to discover ultra-micro-organisms, that is, organisms entirely too small to be seen by means of the ordinary compound microscope. The earlier hopes have thus far not been realized. It is true that the contrast effects between light and dark, upon which the action of the new microscope depends, make it possible to observe microscopic details which were heretofore not discernible, but it has not been possible to actually see organisms which may not also have been seen through an ordinary compound microscope of good definition and of high magnifying power. Repeated observations have thus far failed to discover any ultra-microbes, though it is not absolutely denied that they do not exist. It has thus been possible to develop all known microbes in culture media, and to observe them macroscopically (in mass, collectively) as well as microscopically.

It may, of course, be possible that many of the supposed ultra-micro-organisms are obligatively parasitic, and cannot, therefore, be induced to develop upon artificial (dead) organic culture media, but it is not reasonable to suppose that all are of that nature, and it would, therefore, be reasonable to suppose that such organisms should accidentally have developed in artificial media and thus be made visible to the unaided eye, even though the individuals should be too small to be differentiated optically by means of the compound microscope.

The subject may be summarized as follows:

1. The ultra-microscope is a marked improvement on the ordinary compound microscope, dependent upon refraction contrasts.

2. It is not possible to discern minute objects which cannot also be seen through the compound microscope. It merely brings out details more clearly. It is a difference in definition, which may be compared to the difference in definition between the low and high power of the compound microscope.

3. Ultra-micro-organisms have thus far not been discovered, though it has been suggested that certain diseases, as whooping-cough, small-pox, hoof-rot of cattle, mosaic disease of tobacco, infectious chlorosis of the malvaceæ, etc., are due to invisible organisms, though it has been stated that these diseases are due to pure chemical changes.

Tropococaine seems to be one of the favorite anæsthetics for spinal anæsthesia. It appears to have advantages over the known allied substances. It is used in doses gr. ¾ to gr. 1. Schwarz, who has used it quite extensively **(Presse Medicale)**, speaks very highly of it, but says that it is contra-indicated in children under 14 or 15 years of age.

Professor J. U. Lloyd has recently called attention to the fact that many fluid extracts after they have deposited an appreciable amount of precipitate, contain a larger percentage of alcohol than when they were first made. This is what would be expected, but we believe it is one of those self-evident things which most persons have overlooked, and goes to show that a fluid extract or tincture or some other preparation carrying much extractive matter is apt to contain a larger percentage of alcohol at one time than another. This suggests the necessity of making provision in the administration of the Pure Food and Drugs Law for such changes as are apt to take place in the composition of all galenicals. Without some provision of this kind pharmacists are liable at any time to get into trouble.

Copaiba

It is said that the supply of copaiba at present is limited to an extent which almost amounts to a famine. Because of this, adulteration has reached a very high pitch. The common adulterants are African copaiba, oil of turpentine and gurjun balsam. It is said that parcels containing as much as 50% castor oil are being placed upon the market. It is possible to adulterate copaiba in such a manner as to make it extremely difficult to detect the adulteration. It is very doubtful if its medicinal value warrants the price and importance which it now receives.

Murac

The name murac has been given to a commercial product resulting from the treatment, by a new chemical process, of the latex of certain plants of the saptoaceæ family, said to be abundant along the Amazon River, in Venezuela and the Guianas, some of the West India Islands, Africa, Madagascar and Australia. These trees are referred to as yielding latex freely, so that the supply is practically inexhustible. Thus far, however, the new process has been applied only to balata. Murac is referred to, not as a substitute for india rubber, but as being serviceable for use in connection with low grade qualities of rubber and bringing them up to a higher standard. Certain rubbers, for example, are mentioned as having more than doubled in value by the addition of a few pence worth of murac to a pound in weight of the rubber to be improved. Murac is, however, vulcanized alone, and may be used for many mechanical purposes without the employment of other rubber, under treatment similar to that given to gutta-percha. It is also capable of being used in liquid form, particularly for water-proofing.—India Rubber World.

Sources of Arsenic.—Among the most important sources of arsenic may be mentioned the following: The silver mines of Saxony, Germany, those of tin and pyrites of England, arsenicopyrites or mispickel of Spain, and auriferous mispickel in the Province of Ontario, Canada. The United States is said to consume more than one-half of the world's production of metallic arsenic, white arsenic (arsenious acid), orpiment, and red sulphide of arsenic. Spain in 1905 exported 1,750 tons of white arsenic to the United States and 246 tons to France. Germany produces the largest quantitiy of metallic arsenic and arsenious acid.—Paint, Oil and Drug Review.

A New Tasteless Preparation of Cascara Sagrada

Powdered cascara sagrada, 500 Gm., is macerated three or four times in succession for two or three hours with 1.5 litres of water and pressed. The filtered liquid is evaporated in a vacuum to complete dryness. The extract is powdered and exhausted with absolute alcohol. To the clear dark brown alcohol liquid, alcoholic solution of potash is added as long as a precipitate is formed; this is then collected, washed, and dried. It is said to be odorless, free from bitterness, but an active purgative.—Canadian Druggist.

Extracts from Pharmaceutical Press

COMMENTS ON THE REPORT OF THE A. PH. A. COMMITTEE ON DRUG MARKET AT THE NEW YORK MEETING

What Are Adulterated Drugs?

By Charles E. Caspari, Ph.D., Chemist for the Meyer Brothers Drug Company.

Reports from all over the country have shown that the passage of the Food and Drugs act has had a very wholesome effect on the purity of drugs and chemicals in general. This was especially apparent from the report of the Committee on Drug Market of the A. Ph. A., presented in September at New York, but there are still several articles which it is extremely difficult to procure of the standard fixed by the U. S. P.

Too much attention can not be paid to the difference between adulteration and variation from standard. It is manifestly unfair to brand as guilty of adulteration a man whose goods vary only slightly from the official standard. In a case in Massachusetts a man was fined $100 and his reputation as an honest dealer ruined because his distilled water contained a few more parts of solids per 100,000 than the Pharmacopœia permitted. Such an administration and enforcement of law is **pro bono publico** worse than no law. In laws which are as far-reaching as food laws, and which are capable of working tremendous hardships and injustice to honest dealers, it is unquestionably the spirit and not the letter of the law which should be enforced. The usually ignorant minions of the law whose duty it is to see that the law is enforced, must make some showing in order to earn their salaries, and hence their one object is to obtain evidence, however insignificant it may be, which might assist in a prosecution. To show how hairs are split, the United States Government, which **a priori** is infallible, refused recently to accept a lot of Syrup of Iodide of Iron which differed from the requirements of the U. S. P. only in that it contained 4.91% of ferrous iodide instead of 5%, a difference which was well within the limit of experimental error, especially of the average Government chemist. It seems strange that the party offering that lot of Syrup of Iodide of Iron was not prosecuted for misbranding.

Another matter which requires attention is the correct labeling of such articles which, while far from being adulterated, do not possess the physical constants which the Pharmacopœia has fixed for them. This refers especially to essential oils. How should an oil be labeled, the specific gravity of which falls slightly below that required? It is not permissible to label it U. S. P., nor is it sufficient to express its true gravity on the label. The label must state that it is "for technical use." This is so evidently wrong that it seems ridiculous to consider it at all seriously, and yet it is a condition which must be met. The Government will be right in its ruling only when it has improved upon nature in growing plants which will yield oils possessed of physical constants identical with those required by the U. S. P.

Dr. H. H. Rusby, who has been appointed by the United States Department of Agriculture to assist in the inspection of drugs for the port of New York, reported that the quality of imported drugs has improved wonderfully, and he spoke especially of asafœtida. The report of the committee above referred to touches on asafœtida, and it was found that out of 142 samples examined, 15 only met the requirements of the U. S. P. as to solubility in alcohol. My own results, as chemist for Meyer Brothers Drug Company, show that a U. S. P. asafœtida can be obtained, though the market is flooded with inferior grades. If these poor varieties of asafœtida do not enter this country through the port of New York, then they must certainly enter by way of some other port, and steps should be taken to prevent their entrance. The same is true, to a less extent perhaps, of jalap.

A great deal has been said and written about the standard of the U. S. P. being too high in the case of many drugs containing alkaloids, especially in the case of aconite root, belladonna root and leaves, ipecac and jaborandi, and the report of the committee of the A. Ph. A. shows that many samples of each drug were found to be deficient in alkaloid, but at the same time many were found which exceeded in alkaloidal content the standard of the U. S. P. It is all a question of cost, and I have found that whenever one is willing to pay the price for it, the superior article can always be found, and there is no excuse for using a drug which is below standard strength. — Meyer Brothers' Druggist.

THE PARCELS POST

How It Affects the Country Storekeepers in Europe

C. W. Arthur, a well-known magazine writer, on returning from a tour of Europe, writes that he was greatly surprised to find an absence of retail merchants in all of the small and moderate sized towns in the nine different countries that he visited.

Couldn't Buy What He Needed

The inability to purchase small requirements first brought to his notice how the public demand could be satisfied without the well-equipped retail store such as is found in every American town of 300 population and upwards, and presented a problem that he determined to investigate.

Small Country Store Killed

It appeared that the ordinary citizen was unable to give much information. The older residents stated that formerly there existed such stores, but they had all gone out of business and now all kinds of supplies were purchased from the city merchants (mail-order houses).

Orders were sent by letter or postal card. Parcels post and rural delivery or postal free delivery delivered your purchase at your door.

Further investigation and inquiry in the large commercial cities convinced Mr. Arthur that in the opinion of the most broad-minded business men parcels post and rural delivery (the two proposals are always found yoked together) ruined the retail business and home trade of European countries until today nothing but the smallest necessities can be obtained from the little "shops" that still exist in the villages and small towns of the rural districts, or even small manufacturing towns.

In their places in villages and towns of interest most visited by American tourists there has sprung up a large number of little shops with curios, antiquities, etc. (mostly of recent make), to supply the tourists' craving.

Now, to make the application of these facts to our own situation, is not this the question which must be settled in the present Congress if Postmaster-General Meyer presses his destructive parcels post scheme:

Do we want to adopt European methods and accept European conditions that will surely obliterate our

honorable, industrious, intelligent retail merchant class?

Let the answer be sent to your **Congressman and Senators at Washington.** If you have not made these officials acquainted with your views on this important subject, write them **now**; don't let another day pass without doing your duty to yourself, your brother druggists and your country.—N. A. R. D. Notes.

New Regulations for the Sale of Poisons in Sweden

The new poison regulations in Sweden divide poisons into two classes: the one comprising poisonous drugs and their products, whilst the second includes aniline oil and poisonous colors or preparations of same. To the latter class belong: arsenical colors, such as imperial green, Scheele's green, and colors containing one or other of the following metals in a non-metallic condition: antimony, barium, lead, cadmium, cobalt, copper, chromium (in the form of acids), mercury, nickel, tin, uranium and zinc. Gamboge, picric acid, Victoria yellow (dinitrocresol) and Martin yellow (Manchester yellow-dinitronaphthol), compounds of cadmium, cobalt, copper (e.g., copper sulphate), tin (protochloride and chloride), uranium zinc (e.g., sulphate and chloride), also belong to the same category. The following, however, are excluded from the list: the oxides of tin and zinc, barium sulphate, silicates of all kinds, and driers in boiled linseed and varnish, though preparations of zinc oxid are classed as poisons, together with all dyestuffs and preparations thereof. The following must not be offered for sale: Cosmetic preparations or other toilet articles which contain lead compounds or poisonous colors, children's toys colored or printed with poisonous colors or otherwise contain poisons, paper, cardboard or millboard found to contain 0.2 mgrms. of metallic arsenic in a sample measuring 200 sq. cm., fabrics containing the same quantity per 50 sq. cm., or toys the same quantity of arsenic in the coloring matter scraped from a surface of 100 sq. cm. Edibles must not be offered for sale if they contain poisons or semi-poisons (e.g., zinc oxid), or are packed in direct contact with a wrapping material colored or otherwise treated with poisonous substances. No other metal-foil than tin foil containing less than 1 per cent of lead is to be used for packing. The same prohibition applies to vessels or utensils (intended for the preparation of food) that will yield up lead to a 4 per cent solution of acetic acid when boiled therewith for half an hour, or that are tinned with an alloy containing more than 1 per cent of lead (except the alloy has been used for soldering, in which case it may contain 10 per cent of lead). The following coloring matters are admitted for use in confectionery, provided they do not contain arsenic or other poisonous impurities: White—bone ash, white bole, gypsum, magnesia, chalk, starch, talc; black—bone black, lamp black, India ink; brown—cutch, kino, sepia, burnt sugar; yellow (or orange)—barberry root, Persian berries, fustic, curcuma, quercitron, annatto, marigolds, saffron, tropeolin, weld; red—alkanna red, red wood, dragon's blood, eosine, fuchsine, carmine, madder, rose leaves, safflower, sandalwood, etc.; blue (or violet)—Prussian blue, indigo, indigo armine, campeachy wood, methyl violet, etc.; green—chlorophyll, malachite green, and mixtures of the foregoing blues and yellows; metals—gold and silver leaf or shell silver, all of pure metal, leaf albumen. The importation of colors is not affected by the regulations, but remains subject to the regulations already existing; but, of course, the prohibition of the sale of the various articles enumerated above will have the effect of lessening the importation of such colors from abroad.—**Farben Zeitung.**

The Howl "Substitution"

"What right, what business, what motive beyond that of greed, can the publishers of this country have in their almost unanimous attack on the honor and integrity of the retail and wholesale business men of this country?" asks a prominent advertising man. "Such insinuations, amounting to charges of downright dishonesty against the merchants of the country, have but one result—a reaction against advertising value."

What a beautiful picture is presented by the majority of publications who will flaunt in pages and double pages the great mining schemes, the marvelous air-line railway from Chicago to Heaven, helping the swindler to rob their own readers, and in the next issue holding up their hands in holy horror and shockedness over the evil ways of the retail dealer who exercises his ability as a salesman to induce the customer to buy an article different from what he asked for. And then very gravely and emphatically warns the great public to beware of the dealer.

Beautiful picture, isn't it? Aren't you glad you're an advertising man?

Did you ever hear "Ivory Soap" yawping about substitution?

Did you ever hear "Sapolio" wailing over substitution?

Did you ever hear "Pears Soap" lamenting over substitution?

Pretty successful propositions, too, aren't they? Good advertisers—because they tell the truth and keep up an aggressive effort.

Measure up the man who howls "substitution" and you will find he produces an inferior quality, and he tries by the veneer of advertising virtue to create and maintain a market, purely on advertising claims rather than practical merit. Then when his market is touched by an article of merit, he immediately claims it's not fair play, that his market has been disturbed, and calls upon the publishers to help.—Paint, Oil and Drug Review.

Vinegar as an Antidote for Phenol

Dr. Carleton of New York has found that vinegar is an excellent antidote for phenol. Applied to surfaces burned by the strong acid, it at once removes the bleaching and anesthesia and prevents the subsequent formation of an eschar. It is also serviceable when the poison has been swallowed. In this case the vinegar should be given freely mixed with an equal volume of water and the stomach washed out as quickly as possible.—Practical Druggist.

What is Man?

The Stomatologist says:

"All the constituents of a 150-pound man are contained in 1,200 eggs," said the chemist.

"There is enough gas in a man," he went on, "to fill a gasometer of 3,659 cubic feet. There is enough iron to make four nails. There is enough fat to make 75 candles and one large cake of soap. There is enough phosphorus to make 8,064 boxes of matches (size of box not given).

"Furthermore, that man who is aeronautical will be pleased to know that there is enough hydrogen in him to fill a balloon and carry him up in the clouds.

"The remaining constituents of a man would yield, if utilized, 6 cruets of salt, 1 bowl of sugar and 10 gallons of water."

The Pharmacist and Patent Medicines

Pharmacists, if they wish to pose as professional men, cannot longer avoid their responsibility in connection with the sale of so-called proprietary remedies. They should collectively, and if this is not practicable, they must individually inquire into the nature and composition of the remedies they dispense. If found to be harmful, or not as represented, they can no longer shirk responsibility by hiding under the time-worn excuse that the public demands them, and the public demands must be supplied—M. I. Wilbert, in A. J. P.

A Quick Filter

A quick filter is appreciated in every well-regulated pharmacy.

Take a clear piece of chamois skin free from thin places; cut it off to the desired length; wash it in a weak solution of sal soda or any alkali, to remove the grease, and rinse thoroughly in cold water before using. Tinctures, elixirs, syrups and even mucilages are filtered rapidly. A pint of thin syrup will run through in four or five minutes. By washing thoroughly after each time of using it will last a long time.—**Practical Drug Topics.**

Formula for a Toilet Ammonia

Dr. I. V. S. Stanislaus, writing in **The Apothecary,** declares that for toilet purposes ammonia should not be over six per cent in strength. It is customary, he says, to color these ammonias either green or purple, and they are perfumed generally with rose, although some manufacturers make an attempt at giving them a violet scent by adding a tincture of orris root. Perfumes of the synthetic variety answer the purpose much better than the natural products. Dr. Stanislaus offers the following formula:

Stronger ammonia water, 30 fluid ounces.
Distilled water, previously boiled and cooled, 98 fluid ounces.

Add to this:

Compound tincture of vanillin, N. F., 1 fluid ounce.
Oil of geranium, 10 drops.

Dissolve in this solution:

Potassium bichromate, 120 grains.

Add a few drops at a time:

10 per cent solution of Prussian blue with constant agitation until a delicate green color is obtained. This color is permanent.

Other perfume agents may be used, says Dr. Stanislaus, but the above is very acceptable.

Disinfectant for Sick-Room

Camphor	20 parts
Chlorinated lime	50 "
Alcohol	50 "
Water	58 "
Eucalyptus oil	1 "
Clove oil	1 "

For use, place a little of the mixture upon a plate.—**American Druggist.**

Dandruff and Beginning Baldness

Resorcin	1 drachm
Beta naphtol	½ "
Chloral hydrate	2 "
Tincture of cantharides	4 "
Tincture of capsicum	1 "
Castor oil.	½ to 3 "
Cologne water	4 ounces
Bay rum, q. s. to	1 pint

Editors are judged by what they put into their papers, but they know that this is only half just. Editors keep out of their papers much more than they put in, and this is a point which readers overlook.—**Druggists' Circular.**

STORAGE OF VACCINE AND ANTITOXINS

As is well known, all biological products deteriorate in the course of time. Smallpox vaccine kept at the temperature of the body is valueless after a few days. According to Elgin, it may be kept for years at a temperature of about —5 degrees C. without the least impairment of strength. Our own experiments have shown us that diphtheria antitoxin, under the ordinary conditions of the market, loses about 2 per cent of its potency per month. When kept at a little above the freezing point the deterioration is practically nil. We have no way of gauging the activity of bacterial vaccines and no method of accurately determining the loss in strength on keeping, but we do know that there is some loss, and we know that temperature and light are the most active influences in this direction. The lesson to be learned from this is that **all biological products should be kept as near the freezing point as possible,** and the pharmacist who displays packages of antitoxin and vaccines in his shop window, or keeps them in a show-case, is what our President might call an undesirable citizen, not so much from the standpoint of the manufacturer, as of the patient who must suffer the result of not receiving the full benefit of a product which had been kept under proper conditions. An efficient refrigerator is absolutely necessary in every drug store which handles biological products. This necessity will increase with the increase of our knowledge of immunity. For specific infections drugs will be used less and less, and the use of specific curative and immunizing materials will increase in proportion.—Dr. A. P. Hitchens, in A. J. P.

President Roosevelt Criticised

President Roosevelt, in his message to Congress, gives the credit of the "pure food law" to the Pure Food Commissioners of the United States. This is news indeed to most people, especially to the National Grocers' Association and the associations of the various States which have worked for years for such a measure. We know that there would be no pure food law on the statute books of this State if it were not for the grocers, and even then, as in the Federal Congress, the grocer had to compromise and give up the fight for net weights and take what they got or lose all. Some nature fakirs, undesirable citizens, mollycoddles, or those whom he would characterize with an uglier, shorter name; have got the ear of the President, and robbed those who have led every forlorn hope for years of the credit and given it to those who were unheard of when the fight was on. No one can deny, if it were not for the grocers of the United States there would be no pure food law now on its statute books. Let us write these words down, as Luther did his sentiments in his discussion with Zwingli, and maintain them in the face of all who deny them, no matter how exalted.—Tacoma Forum.

Cut Rates Are No Longer the Fashion of the Day

Pharmacists seem to be among the first to realize the gradual change in public sentiment. A prominent pharmacist of Philadelphia, who has built up trade for half a dozen stores as well as put aside a snug fortune, declares that while he made his start as a cut-rate druggist he could not meet with the same success today, for the public has learned its lesson in the cut-rate business. We hear the same story from experienced pharmacists in all sections of the country, and we also know that the druggists everywhere are slow to take advantage of any opportunity they may have to cut prices. —Meyer Brothers' Druggist.

THE PACIFIC PHARMACIST
$1.50 a year Subscribe yourself and get your friends to do the same.

Severe Punishment for Adulterating

In a recent issue of the Progres du Nord there is printed an official extract from the judgment rendered in the case of one "Dubois, Francois Auguste, twenty-five years of age, born at Sainghinen-Weppes, the 2nd of August, 1881, profession of merchant of butter, living at Wavrin, in the hamlet of Don." The extract gave full publicity to the fact that the dealer named had been convicted of a violation of the law pertaining to the commerce in butter, and had been sentenced to one month's imprisonment and a fine of 500 francs. It was also decreed that the judgment be published on the front page of three of the leading local journals, and in posters displayed on the door of the house of Dubois and on the door of the office of the mayor of the commune. The size of the type in the poster is specified as full-faced three-line pica for the names of the judge and the criminal, a smaller type of a specified size being used for the remainder of the poster. **—Paint, Oil and Drug Review.**

Crushed Olive-Stones

Some idea of the extent of the business in crushed olive-stones may be gathered from the fact that in 1906 about 1,000 cwt., valued at £643, were exported from the district of Magnesia, in Greece, to "other countries," the quantities exported in 1905 and 1904 being 750 cwt. and 100 cwt. respectively. The exports to other parts of the Hellenic Kingdom, however, were considerable.

The above figures show the nature of the business in this product, which solely finds an outlet in the adulteration of pepper, gentian, licorice, and other powders. Indeed, the substance known as "pepperette" or "poivrette" is composed of practically nothing else but crushed olive-stones. It would be interesting to know the exact destination of the above exports, but on this point the British Consular report, from which we take the above figures, is curiously silent, although analytical tables are given showing the various countries to which the principal articles were sent. Greece is not alone in this nefarious business, as Italy is also an acknowledged supplier, and as a secret buyer the purchases of the United States are not inconsiderable. **—Chemist and Druggist.**

CHEMISTS CRITICIZE DR. WILEY'S RULINGS

On Friday, November 8th, there was a meeting of the New York Section of the American Chemical Society, at which the arbitrary rulings of Dr. Wiley, Chairman of the Board of Food and Drug Inspection, were the chief topic of a long discussion, which ended in the adoption of the following resolutions:

WHEREAS, The Food and Drugs Act of June 30, 1906, is generally approved, and in the opinion of the New York Section of the American Chemical Society it is one of the most important measures which has been taken for the protection of the public; and

WHEREAS, On the other hand, we can not but feel that the Rules and Regulations published from time to time by the Department of Agriculture, for carrying out the provisions of this act, are not in full accord with the knowledge and experience of some of the members of this Section, who are experts in these matters, and inasmuch as there is a conscientious difference of opinion concerning the same; therefore, be it

Resolved, That we respectfully request the Honorable Secretaries of Agriculture, the Treasury and Commerce and Labor, who are given the authority to administer this law, to suspend the publication of these decisions temporarily, and before taking further steps in this direction to consult with a carefully selected committee of experienced chemical manufacturers and scientists, recognized as authorities in these fields.

On October 25th, the New York Section of the Society of Chemical Industries passed similar resolutions, from which it would seem that the manufacturers composing that society are determined not to submit further without protest to the injustice from which they have suffered by the arbitrary action of the board, of which Dr. Wiley is the chief.

It requires more or less courage for a food or drug manufacturer to even lodge a complaint under the circumstances, for Dr. Wiley, virtually, has it in his power to destroy their business reputations, and, naturally, it is not policy to enrage him. But it is a disgrace for a free country to put so much power in any man's hands, it matters not how good and great he be, or under what pretense it is done.—**National Druggist.**

Trade Secrets Are the Property of Employers

An interesting legal decision has been rendered by the New Jersey Court of Errors and Appeals in the case of the Vulcan Detinning Company against the American Can Company. The litigation has extended over a series of years and arose out of the use by the American Can Company of a process of separating and recovering tin and steel from tin cans and waste scrap which the Vulcan Detinning Company claimed to own. This is an electrical chemical secret process which was purchased in Holland by the organizers of the Vulcan Company. This company, soon after its organization, began to buy scrap tin from the American Can Company and made large profits in detinning, but the American Company established a plant of its own for that purpose, and, it is alleged, employed two former superintendents of the Vulcan Company and another of its employees, who had become thoroughly familiar with its processes. The Vulcan Company applied for an injunction, and the case went to trial. In the lower court it was decided adversely to the Vulcan Company, but an appeal was taken and the decision handed down sustains the Vulcan Company on every point. In other words, the New Jersey court finds that the former employes of the Vulcan Company who received knowledge of the secret process in confidence became its trustees, with all the duties and obligations of such position, and that their trusteeship continued after their period of employment expired.

This is a matter of importance to every employer of labor. The haunting fear lest trade secrets be disclosed to rivals through employes who are unscrupulous enough to sell those secrets along with their services, would be set at rest if the courts would take the same view as now taken by the New Jersey court of the trust nature of such confidential knowledge imparted to a workman in the course of business.

Wholesale druggists report a year of general prosperity in all lines that they handle. Especially is this true of the better grades of toilet goods in which sales have been of large proportions. During the greater part of the year the purchasing public has had plenty of money to buy what are commonly regarded the luxuries of life, and that condition favors a generous business for the druggist.—**Paint and Drug Review.**

WHEN HE STAMMERED

Employer (engaging clerk)—But do you always stammer like that?

Applicant—N-n-n-oo, sir; only w-w-when I t-t-talk.—Sourire.

THE DEATH OF LORD KELVIN

With the death of Lord Kelvin—long known as Sir William Thomson—a master in science has gone from among us, but it will be long ere the impetus of his fruitful life ceases to influence the world of knowledge. His was one of those cases in which the promise of the future was early shown. The son of a distinguished mathematician, coming of a vigorous Scotch-Irish farmer stock, Thomson was born at Belfast, June 25, 1824. While yet young his father removed to Glasgow to take the chair of mathematics in that university, and there young Thomson received his early education. From Glasgow, where he had already made himself known to science by his mathematical and physical papers, he entered St. Peter's College, Cambridge, where he took his degree in 1845 with the highest mathematical honors. Shortly after he was elected to a fellowship in his college, which he retained until 1852, when he vacated it on his first marriage, according to the university regulations prevailing at that time. He was, however, restored many years later to his fellowship, under a statute of the college which permits the election to a fellowship of men eminently distinguished in science. His subsequent career was one long triumph of illustrious work fitly recognized with such honors as his sovereign, his country and the scientific world at large had it in their power to bestow. First came his election at the early age of 22 to the chair of natural philosophy at the University of Glasgow, which post he held until his retirement in 1899. The story of his life's work has been told too often to need repetition here. There are few, we imagine, who are ignorant of his triumph in overcoming the difficulties incident to the working of the Atlantic cable, whereby the possibilities of submarine telegraphy became opened to their present extended application. It was for this work that he was raised to the dignity of knighthood, the adornment of which dignity he far outpaid in kind. In 1891 there came to him the great distinction of being made president of the Royal Society and in the following year a peerage was bestowed on him. His invention of the mirror telegraphic receiver and the siphon telegraphic recorder, his improvement of the mariner's compass, his method of deep sea sounding by means of piano wire, and many other achievements in applied science, are now ancient history.

By his instrumentality in the establishment of the natural sciences tripos at Cambridge, moreover, he aided materially the process of medicine, for the biologic sciences form no insignificant part of the optional curriculum for that tripos, and it is safe to say that without the natural sciences tripos the splendid awakening of the University of Cambridge as a medical and as a scientific school, developed as it has been under the fostering care of the late Sir George Murray Humphry and Sir Michael Foster, would hardly have taken place. To Sir William Thomson, too, medicine owes a debt of gratitude, in that to him is due the first opening of research laboratories to students. When he became professor of natural philosophy at Glasgow, and was entering on his great work on the electrodynamic qualities of matter, about 1847, he called on his students to aid him; and from that time on the principle of laboratory work, instead of the mere attendance on didactic lectures, expanded until now we realize that without practical laboratory work any system of instruction in any of the sciences must be inadequate indeed.

There is one other phase of Lord Kelvin's character that in these present days is particularly worthy of note. He, at least, did not find a thorough acquaintance with the deepest problems of science and a conviction of a first great cause, with its inevitable corollary of a future life for man, incompatible. Addressing medical students recently, he said: "Do not imagine that by any hocus pocus of electricity and viscous fluids you can make a living cell. You must never think of the living men and women and children, with whom you will have to deal in your daily work, as mere laboratory specimens, but as human beings."

And earlier, in his presidential address to the British Association for the Advancement of Science, in 1871: "It is also impossible to conceive either the beginning or continuance of life without an overruling creative power, and, therefore, no conclusions of dynamic science regarding the future condition of the earth can be held to give dispiriting views as to the destiny of the intelligent beings by which it is at present inhabited."

It is certainly worthy of note that even in these latter days a man of science, of undeniable preeminence in the branches that more perhaps than others have led in many minds to this **impasse** between the modern knowledge and the ancient faith, finds in the place of contradiction a compelling unity.—**Journal A. M. A.**

THE DEATH OF W. H. BURKE

We learn with deep regret that Wm. H. Burke of Detroit, proprietor of several drug stores in that city, died by his own hand on the 17th of December. Mr. Burke was an enterprising and aggressive business man, not much over 40 years of age, and when we saw him in New York a few months ago appeared to be in the prime of life, physically and mentally. Like many men of his temperament, he greatly overworked himself, thereby bringing on nervous exhaustion, insomnia, and in a short time insanity, to which last condition is to be attributed the taking of his own life.

Mr. Burke had been a very successful pharmacist. He built up in a comparatively short time a large drug business, controlling, up to the time of his illness, four stores. While others were associated with him in this enterprise, his was the dominating spirit. His energy and capacity developed the business in the several stores. Unfortunately he overestimated his ability to stand the strain which this involved. A man of less ambition and less capacity, with his splendid physique, might reasonably be expected to attain the full age of three score years and ten, but his life was cut off in its very prime through over-ambition.

It is gratifying to note that, while intensely energetic in pushing his own business, Mr. Burke took a lively interest in matters affecting the entire drug trade. We quote the following by Chas. F. Mann of Detroit to N. A. R. D. Notes:

> To me Will Burke was the peer of Michigan retail druggists. He was one of the few men who built up the Detroit local association under the banner of the N. A. R. D. He interested himself in everything that pertained to the retail drug business, and while his great ambition to be at the head of an immense business institution was uppermost in his mind, his interest in pharmacy in all its phases was complete.
>
> Mr. Burke was a rare type of the modern big retail druggist who took active part in the work of the local and State associations. At the last annual meeting of the Michigan Ph. A. he took time to renew his interest among old friends and admirers, and was one of the moving spirits of the meeting. He was for three years a most active, energetic and efficient secretary of our State organization. For years Mr. Burke has not missed a meeting of the A. Ph. A. and was active in the work of that body.

The following from a symposium on "The Inventory," in the Bulletin of Pharmacy for December, will have a peculiar interest at this time, because it is probably the last contribution that Mr. Burke made for the benefit of his brother pharmacists:

> I feel certain that if pharmacists knew the very great profit there is in knowing the exact amount of stock carried, as well as its condition and other facts that are discovered by taking an inventory, they would accept the task in a more cheerful manner.
>
> If it did no more than familiarize the stock-takers with prices, sizes and other information that must be absorbed during the process, it would be time well invested. Every inventory brings to light a great many goods that should be moved; these goods will not be sold unless they are noticed, and they will not be noticed unless an inventory is taken.
>
> **Cost Prices on the Goods a Great Help.**
>
> It seems to the writer that the most simple and best way to take an inventory in the ordinary drug store is to use inventory sheets such as jobbing houses usually employ. The form of inventory books, however, is of secondary importance, and the same books or the same methods would not be the best for every business. If all goods are properly marked with the cost, it facilitates the task greatly, because it often takes ten or fifteen times as long to find out the cost on some items as it does to note the amount you have on hand.

Personals

W. L. Pattiani, for the last seventeen years manager of the city department of the Langley & Michaels Company of this city, is about to retire from the drug business. Mr. Pattiani commenced his business career with Chas. Langley & Co. in 1878. He worked up through every department, until he was at the head. During all of these years Mr. Pattiani has ingratiated himself into the kindly feelings of a large number of business men, including the leading pharmacists of the Pacific Coast. He will be greatly missed by many when they visit the old firm, and especially by those city pharmacists who naturally went to him in their dealings with the firm.

Mr. Pattiani is going to live near St. Helena, where he has purchased a vineyard and extensive winery, and will engage in the manufacture of wines on a considerable scale. This will be to him, doubtless, an ideal life. For many years, as the business of the firm of Langley & Michaels Co. has grown, the strain upon him has been constantly increasing, so that he now feels the necessity of seeking a less strenuous life, and we wish him, and we feel sure that many others unite with us in this sentiment, many years of happy, prosperous life.

One of the popular business houses of Marysville is the Englund drug store. This place has been established many years and is firm in the confidence of the people.

The Ekman-Stow olive oil mill of Oroville has begun the manufacture of oil.

Articles of incorporation have been filed by the Charles H. Ward Drug Company of Pasadena and Los Angeles. C. H. Ward, C. L. Parsons, A. L. Hawkins are the three directors and principal owners of the new concern, which is capitalized at $25,000, with $20,000 subscribed.

William Aroman of Seattle, Wash., is in the city of St. Maries, Idaho, with a view to locating a turpentine distillery there. If he decides to erect the plant it will be on an extensive scale, employing eight or nine hundred men.

The first inspection of Tacoma drug stores and manufactories under the Pure Food Act has been completed by Deputy State Drug Inspector George D. Prigmore. There are thirty-eight drug stores and manufactories of medicines in Tacoma which come under the inspection and, according to Mr. Prigmore, the manufacturers are all observing the law, while the retailers have not generally been complying with it, pending an explanation of the requirements.

Smith W. Miller, who recently bought out the Christmas Lake borax king, W. T. Smith, is making preparations to put up a refinery at Gold Hill, Ore. It is expected to have the plant in operation before the water covers the land in the spring.

The Ewartsville Grange at Pullman, Wash., has taken the first steps toward the establishment of a denatured alcohol distillery. Denatured alcohol lamps have been installed in the grange hall and are giving satisfaction.

The American Borax Company has struck a new borax mine near Land Station, Cal., on the Southern Pacific Railroad. Explorations are being conducted by Henry Blumenberger, manager of the Western Borax Company's works at Daggett, Cal.

Dr. Frederick D. Webley has removed from Santa Rosa to Santa Cruz.

During the past few years the Stockton Drug Company has come rapidly to the front as one of the leading pharmacies of Stockton. The location, at the corner of Sutter and Main Streets, on the most prominent corner of town, is accessible by all car lines. Since the first establishment of a drug store on this corner the business has prospered, and now, under the new proprietors, it is larger than ever before.

The new one-story brick building being erected by John Gall at the corner of Main and Center Streets, Turlock, is nearing completion, and will be ready for occupancy soon.

Mr. Geo. C. Sharp of Elsinore has sold his drug store to Messrs. Boyd & Lytle of San Diego.

The host of friends and business acquaintances of Dr. L. E. Nowers, the well-known proprietor of Nowers' drug store on G Avenue, will feel even more grief than surprise that his store is closed this morning and that he has decided to go out of the drug business in Douglas, Arizona.

A deal which has been pending for some time, but which has just been announced is the sale by A. Skinkle, Jr., of his interest in the Hardman drug store, Riverside, to Dr. J. H. Hudson. Mr. Skinkle, who has had a controlling interest in the business since last February, will go to San Francisco to engage in business.

Lynn Boyd and B. C. Lyttle of San Diego have sold their drug business in that city and have gone to Elsinore to reside.

The Empire drug store of Spokane has been sold to William Spring of Ritzville at administrator sale for $1,000.

H. L. Fulton has resigned his clerkship in the Sun drug store of Riverside and will soon establish a new drug store at Brawley, in the Imperial Valley.

Dr. M. C. Billings of San Bernardino has secured the services of W. Stivers, a druggist of large experience, formerly of Kansas, late of Los Angeles. Mr. Stivers has arrived and his family will come later.

So far this season the American olive Company has shipped ten cars of olives from Oroville and Palermo.

A big oxygen tank exploded at the German drug store, which is situated in the central part of the City of Mexico, causing considerable alarm and no little damage. The clerk who was preparing the oxygen had a very narrow escape, as the explosion occurred just when he had gone into an adjoining room to bring some substances.

J. L. Myers' new drug store, South Bend, Wash., is rapidly nearing completion and will soon be ready for the stock.

Frank Carter, the son of Mel Carter, and a Modesto raised boy, is making arrangements for the opening of a drug store in one of the stores in the Johnson building on I Street, about the first of the year.

The Hahman Drug Company, Santa Rosa, has moved from its temporary quarters on Mendocino Avenue to the new Paul Hahman Building, on Exchange Avenue.

Unusual interest is being shown by the Compton people on account of the fine new drug store that is replacing the old one. P. W. Barritt, who is managing the improvement, is a pharmacist and manufacturing chemist of high esteem from Los Angeles.

T. K. Mehrtens, who for the past year has been identified with Malone's San Rafael Pharmacy, has severed his connection with the concern and will hereafter have charge of one of the branch stores of the Maritime Drug Company of San Francisco.

W. M. Poley, the druggist, is busily engaged in removing stock and fixtures to the Farlow-Rhodes Block, Ashland, Ore., facing the Plaza, where he will have commodious quarters, 20 feet in width by 85 feet in depth, affording ample space for display of goods.

C. J. House of Everett, Wash., sold his drug store to E. A. Roberts of Monroe.

Few cities the size of Santa Rosa are blessed with the high-grade drug stores to be found there. One of the old standbys is the St. Rose, and there can be found everything required in the drug or medical line.

Messrs. Boyd and Lyttle, the San Diego druggists who have purchased the Sharp drug business, have purchased 30 feet of frontage on Main Street of W. F. Porteous.

The names of J. F. Childs, F. M. McCallum, C. H. Rauen, Henry Bicknell and F. O. Boyer appear on the articles of association as incorporators of the Honolulu Drug Company, Limited, filed with the Treasurer of the Territory.

Messrs. A. J. Neve and **J. N. Kirkland,** who recently purchased the drug store of Louis Roeder in the Pacific Electric Building, 606 South Main Street, Los Angeles, will reopen the store under the firm name of the American Drug Company.

R. C. Ramage has a very neat drug store at the corner of Pasadena Avenue and Avenue 39, Los Angeles. His place is becoming popular in all the surrounding neighborhood, though it has been open but a few weeks.

Brunswig Drug Company's buildings in Los Angeles cover over an acre of ground at the corner of North Main Street, running through to Republic, thence to New High Street, with a frontage of half a square on New High Street. A branch house at San Diego looks after that end of the trade.

Merrill A. Washburn of Sacramento, for many years a well-known druggist, passed away at his home after an illness of over a year.

Frank J. Quirin, proprietor of a local pharmacy, has returned to Sacramento from Victorville, 110 miles from Los Angeles, where he has for the past few weeks been prosecuting an unsuccessful search for his brother, A. P. Quirin, who disappeared from his ranch near Victorville and is believed to have wandered out upon the desert and died from starvation.

The Lang Drug Company, whose store is at No. 31 Washington Avenue, is the oldest drug firm, if not the oldest firm of any kind in Richmond.

Dr. J. B. Sands, who established the Venice Drug Company of Los Angeles, and who was one of the first medical practitioners to locate in the Ocean Park district, has been elected by the City Trustees to the vacancy caused on the board through the death recently of A. Ed Robinson.

Charles B. Whilden, Secretary of the State Board of Pharmacy, and Dr. G. D. Pratt, a deputy of the same, have made out numerous complaints charging California druggists with violation of the poison law and the pharmacy law.

Fernand Javal of Paris, son of the proprietor of Houbijant's, one of the largest perfumery establishments in the world, came to Los Angeles to investigate the possibilities of this section with a view to opening a branch of the Parisian business.

The Redwood City **Democrat** recently issued an illustrated edition of their paper, showing many of the principal business houses, factories and residences of that progressive city. The store of A. D. Walsh and P. A. Ryan and the beautiful home of the former occupy prominent places among the illustrations. We are pleased to note that Mr. Walsh is President of the Board of Trade, a position accorded to him on account of his many years of honorable business dealings in that community and of his public-spirited and progressive character.

W. H. Groat, the popular representaive on this Coast of Lehn and Fink, dropped in at our office the other day. He reports business good, and says San Francisco is all right.

Fairchild Bros. and Foster gave a Christmas party to their employes on Christmas eve. A programme of twelve numbers followed the dinner and must have been very enjoyable, as it embraced a variety of talent, vocal, instrumental, histrionic, terpsichorean and elocutionary.

Barrington's Pharmacy, San Jose, had a narrow escape from fire a few days ago. The clerks, after making 10 pounds of red fire, were testing it, when a spark was communicated to the mess and an explosion ensued. The clerks, Messrs. Jas. Mulcarrie and Harry Thompson, were badly shaken up and burned about the hands and face, but are now on duty again.

For the past three weeks members of the State Board of Pharmacy have been working in San Jose and vicinity. They succeeded in making five convictions of unlawful selling of poisons, and instructed the district attorney to insert the following notice in the San Jose papers:

Warning

To Druggists and Others

Your attention is directed to the penal provisions of the act regarding the sale of poisons (including strychnine) and of the act Regulating the Practice of Pharmacy, and especially Section one (1) of the latter, forbidding the use of assistants other than registered assistant pharmacists. All violations of said laws will be rigorously prosecuted.

JAMES H. CABPBELL,
District Attorney.

The grocery stores were not overlooked in the crusade, and those selling poisons and drugs were notified to stop doing the same or be prosecuted.

The Morehead Fleming Drug Co. have opened a well-equipped branch pharmacy at the corner of San Carlos and San Fernando Streets, San Jose.

The Wm. S. Merrell Chemical Co.

We are pleased to state that this old established firm is still carrying on its business as usual, notwithstanding the financial stringency that has so seriously hampered many manufacturing firms. Their large force of traveling men are at work, and the entire business of the concern is going on with the usual vigor.

We regret to note that their depot on Van Ness Avenue in this city was recently destroyed by a fire which originated in a neighboring store.

California Pharmaceutical Association, May 19, 1908. Where shall it be—Los Angeles, San Diego, San José, Fresno, Stockton, Sacramento, Santa Cruz or Del Monte?

Pacific Coast Pharmaceutical Association, when and where?

American Pharmaceutical Association, Hot Springs, Ark., Sept. 7, 1908.

Waterproof Ink

An ink suitable for inscriptions on stone, tombs, or other places where dampness may attack is made as follows: Pitch, 11 lb.; lampblack, 1 lb.; turpentine sufficient to make soluble. Mix with heat.—Contributed by Frank Pavlik, Jr., Winnetka, Ill., in **Popular Mechanics.**

Drug News

The California Drug Clerks' Union sent out quaint invitations to their friends in the shape of a subpœna to appear on New Year's day at Hamilton Square Hall, between 10 a. m. and 12 p. m., as a witness in an action against A. Gobbler Turkey, et al., and each witness was further commanded to bring with him one appetite, and one thirst, and one ear for music.

In due time the court assembled, and the case of A. Gobbler Turkey was discussed. It is needless to say that it went against him; in fact, when the suit was over he did not have a leg to stand upon, and was literally thrown out of court. There was great rejoicing over his discomfiture, and the prosecuting witnesses continued their jubilations until the wee sma' hours.

Belladonna Culture in California

The field cultural operations in the belladonna fields of Johnson and Johnson in Castro Valley, near Hayward, California, are now in full swing. By the middle of February, 1908, thirty-two acres will have been planted. Some of the seed is planted directly into the field, some in cold beds to be transplanted when the seedlings are sufficiently large. Thus far the season has been quite favorable for the field operations.

There is pending a law before the Pasadena City Council to prevent the distribution of patent medicines and samples, and another to fix the license for street shows by patent medicine fakers at $200 per day. Some of the Council are in favor of absolutely prohibiting public shows for the peddling of nostrums.

Before we are brilliant let us be plain.

The following incident happened in a High School in California:

Teacher (to second year history class)—Why is the city of Pisa still renowned throughout the world?

Student—Because of the celebrated cough cure made there.

Some time ago a man came into the drug store and asked for a bottle of Ayer's Hair Vigor.

"If my hair don't begin to come in with this bottle, I'll not take another dose of this stuff," he said. "I have taken four bottles and my hair has not come in at all."

"But you don't swallow it, you rub it on your head," he was told.

"Why," replied the man, "I thought you took it internally, it has an awful taste."

The Business Side of Pharmacy

A course of lectures on this topic will be delivered shortly to the senior class of the California College of Pharmacy in the lecture hall at the Affiliated Colleges. The first, on "Pharmacy as a Profession, and as a Business," will be by Professor W. M. Searby on Tuesday, January 14, to be followed by two by Mr. Valentine Schmidt on "The Fitting Up of a Drug Store" and on the "Management of the Dispensing Department." Other lectures will follow, discoursing on buying and selling goods, keeping stock, drug store bookkeeping, etc., by well-known pharmacists.

Chicago School of Sanitary Instruction

Articles of incorporation have been granted for a school bearing this name, with Health Commissioner W. A. Evans, Assistant Health Commissioner Reilly, and Dr. J. Biehn as founders.—**South. Calif. Practitioner.**

Boxes, Labels
Cartons, Etc.

Order by Mail Now
From
F. C. FELTER
228 Lumber Exchange Building
Portland, Oregon
Representing Pictorial Printing Co., Aurora and Chicago, Ill.

The six-story, fire-proof, brick establishment of the Clarke-Woodward Drug Company of Portland is a revelation in structures built for properly conducting a large wholesale drug business. No expense was spared in making it complete and equipping it with every facility. From the big, roomy basement to the top floor, with its stores of heavy chemicals, it is evident that not only is the structure built for business, but that it's strictly business that is being transacted within it.

Efforts of Western stockmen to have established at some central point in the range States a field pathological station for the study of outbreaks of disease among sheep, cattle, hogs and horses, are being seconded by the Oregon Woolgrowers' Association. Resolutions indorsing the movement have been adopted by the organization and the secretary has been instructed to urge upon the Secretary of Agriculture the necessity for the establishment of this field bureau at once.

Portland may have a laboratory, a chemist and a bacteriologist, to work in conjunction with the market inspector and health officers, with an appropriation of probably $5,000 for the operation of the department and salaries of the attaches. That a recommendation to this effect will be made by the Ways and Means Committee of the City Council is regarded as certain. In fact, some of the members at yesterday's meeting declared them an absolute necessity, if the food supply of the city is to be kept anywhere near the required standards of purity.

Larkspur Poisons Cattle

According to the Rocky Mountain Druggist, a vast tract of grazing land northwest of Gunnison, Colo., has been so overgrown with larkspur that cattle feeding upon it are dying in great numbers. The State veterinarian has advised the removal of the cattle to other fields until the plant ceases flowering. The report does not specify the name of the plant, but it probably is Delphinium consolida, commonly called field larkspur.

Altassyrisch

By Scheffel

Translated by Dr. W. C. Alpers

In the Black Whale Tavern at Askalon
A prophet sat, and drank
For three long days, till stiff as a board
On the marble floor he sank.

In the Black Whale Tavern at Askalon
The landlord growled: "I say,
Of wine and beer that fellow drinks
Much more than he can pay."

In the Black Whale Tavern at Askalon
The waiters said: "We will
Present him on six massive bricks
In cuniscript his bill."

In the Black Whale Tavern at Askalon
The prophet laughed: "I spent
In the Druggists' Club at Nineveh
My very last red cent."

In the Black Whale Tavern at Askalon
Just when the clock struck four,
The fisty porter of Nubia fired
The stranger through the door.

In the Black Whale Tavern at Askalon
A prophet has no show,
And if you're in for a jolly time,
Pay **cash,** or quit and go.

—Apotheker-Zeitung.

Alfred Holzman Co. of Chicago have got out some attractive Valentine and Easter cards. These cards consist of ten Valentine cards and ten Easter cards and are called "Sunbonnet" Series. The designs are entirely different from subjects that have so far been used for illustrating the Valentine and Easter holidays. The cards represent a cute little sunbonnet baby playing with hearts, chickens and rabbits, and cleverly illustrating the symbols of these two holidays. (See advertisement.)

To Restore Color to Aluminum

To restore gray or unsightly aluminum to its white color, wash with a solution of 30 parts borax in 1,000 parts water, with a few drops of ammonia added.—**Popular Mechanics.**

Emulsient is the new name for "emulsifier" or "emulsifying agent." It is an improvement. **Let** the fittest survive.

Famine in Drug Clerks

Although salaries have practically doubled in the last two years, there is a great scarcity of drug clerks in New York today. Many pharmacists are hard put to find assistants, and there seems to be little prospect of a renewal of the former supply. The scarcity is largely accounted for by the strict provisions of the new law which requires graduation from a college of pharmacy as well as four years' actual experience as an assistant before a man is entitled to a certificate as a pharmacist.

Mallinckrodt's Pure Ether for Anæsthesia at Lower Prices

Government regulations now permit the manufacture of ether from alcohol on which no internal tax is levied. The Mallinckrodt Chemical Works, therefore, announce that they are offering their pure ether for anæsthesia, as well as other ether preparations, at much lower prices than heretofore prevailed. The ether sold by the Mallinckrodt Chemical Works for surgical inhalation is marketed under the caption "Ether for Anæsthesia." This ether they manufacture from the purest grain alcohol, under the supervision of skilled and experienced chemists, and it is especially tested and selected to meet the requirements of surgeons for an ether of the highest attainable purity and uniformity. It contains even a greater percentage of pure ether (ethyl oxid) than the Pharmacopœia requires, and is a superior article in every particular. It is advisable for pharmacists and physicians when ordering ether to specify **"M. C. W." Ether for Anæsthesia** in order to prevent any confusion with the other grades they supply. The Mallinckrodt ether for anæsthesia is put up under a white label with the words "For Anæsthesia" printed in red, while all of their other grades are sold under a blue label.

Cut It Out

Have you had a day's hard work?
  Do you feel down in the dumps?
Do you wish that you could shirk
  Life with its hard knocks and bumps?
Is there no bright end in view?
  Do you feel that you must doubt
Man's ability to do
  Any good? Well, cut it out!
—Exchange.

The State Pure Food and Drugs law has gone into effect. Professor Meyer E. Jaffa, professor of nutrition of the University of California, was officially appointed as director of the State Food and Drugs laboratory.

While the appointment of Professor Jaffa was made last July, it could not be legally ratified until the law went into operation on the first of the year. Professor Jaffa will receive a salary of $3,000 a year as director, but will not relinquish his instruction work in nutrition at the university. He will not, however, receive a salary from the university, but will retain his title and be a member of the faculty, with full privileges.

According to the vote of the board of health the University of California has been named as the place where the laboratory work in connection with the carrying out of the new law will be done. A staff of university students will be the assistants, and thus the work of the newly created department will be removed from all political influences. The staff of assistants will be announced in a few days.

Reincorporation

We desire to inform our friends, and the public generally, that we have reincorporated under the name of "The Cutter Laboratory"—having dropped the word Analytic out of the name. There is no change whatever either in the membership or management. We have increased our capital stock and enlarged our facilities and are better prepared than ever to produce the purest and best biologics on the market, and give prompt and faithful attention to all orders. We wish to thank our friends for having made these changes necessary and possible, and to assure them that their loyal support and patronage is greatly appreciated.

We are at your service and trust you will command us freely. Respectfully,

THE CUTTER LABORATORY,
Successor to The Cutter Analytic Laboratory.

The City Council of Ameca, Mexico, has addressed a communication to the State government asking that the sale of patent medicines be forbidden, especially in commercial houses other than drug stores.

In addition to our full line of

Pharmaceuticals and Pharmaceutical Specialties

We have the finest and most complete line of

Buyer's Label Goods

And any Druggist who desires to put his push and energy back of *his own* specialties, and who wants in every package, conscience-quality, and on every label that taste and neatness that half sell the goods, should write for labels and prices to

HENRY K. WAMPOLE & COMPANY
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Manufacturing Pharmacists
PHILADELPHIA, U. S. A.

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POWERS-WEIGHTMAN-ROSENGARTEN CO.

Manufacturing Chemists

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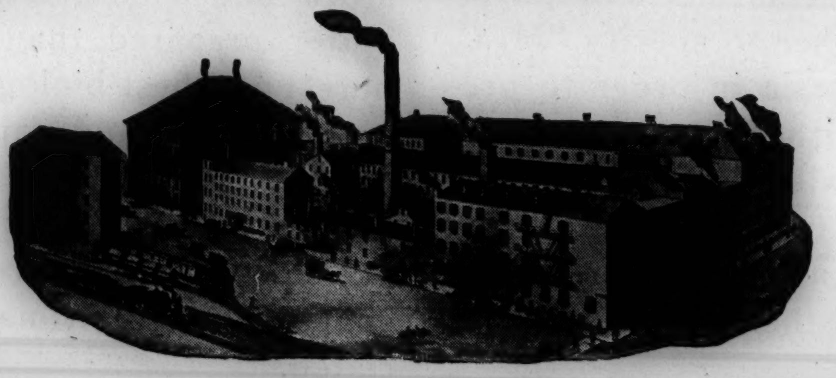

OUR SERIAL GUARANTY No. 15

Morphine Sulphate, Flakes or Cubes
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Codeine. Cocaine. Strychnine
Acid Tannic. Iodoform. Thymol Iodide
Sodium Salicylate. Iodine Resublimed
Mercurials. Santonin. Salicin. Salol
Ether. Collodion. Chloroform

Bismuth Subnitrate, Bulky, Tasteless
Sodium Phosphate, Pure, Granular
In Bottles, Cans or Cartons
Gold and Platinum Chlorides
Silver Nitrate and Other Salts
C. P. Acids—Sulphuric, Hydrochloric
Nitric and Acetic

POTASSIUM IODIDE, CRYST. OR GRANULAR

COMPLETE LIST ON APPLICATION SPECIFY P-W-R ON YOUR ORDERS

PRICE LIST OF DRUGS, CHEMICALS, ETC.

These prices are submitted as ruling in the San Francisco market at time of publication, and are subject to fluctuation. Quotations are based on ordinary quantities, such as usually purchased by the average dealer. Containers are included unless otherwise indicated. See foot-note.

THE MARKET

Retrospect and Prospect

While the business world has passed through trade conditions bordering closely upon what may be termed somewhat trying, from all indications the drug trade enjoys the happy distinction of being a line which has, by comparison, felt the effects of the financial depression of the past months in a minimum degree, and it may be stated that the year just closed can be summed up in its total as a prosperous one.

The year was ushered in with a condition of remarkable prosperity, the confidence of the people being so strong that there was little hesitancy in incurring unusual obligations. Not many months had passed, however, ere the pace began to slacken in some directions, and there began a general drawing in of the "horns" by many large producers and distributors, with a consequent curtailment of production, and it would have been far wiser if this spirit of conservatism had materialized at an earlier date. Without confidence there is no credit; with credit gone, the inevitable result—a money panic.

The advent of the new year reveals a much improved state of feeling, and it is predicted by representatives of the drug trade for the year upon which we have entered, while no boom may be expected, that as the purse-strings of the money market are loosened up, conditions throughout the country will improve and the end of the twelfth month will show a satisfactory volume of trade for the year.

It is prophesied that the matter of profits will be looked into more closely than before, and in the end business will be conducted on a safer and more lucrative plan.

On account of dullness of trade during the holiday season, price changes since our last issue are not of a startling nature. An agreeable feature to the retailer is the smallness of the "advance" column. As the sowing time approaches with unanticipated large stocks on hand, the price of opium keeps on the down grade. While higher figures are obtainable at the bark sales, it has had apparently little influence on the market price of quinine, which remains normal. Citric acid has taken another drop, owing to an easier tendency of the raw material, coupled with a keen competition from foreign sources. Higher rates for the imported castile soaps may be expected, some of the leading manufacturers having issued advanced schedules; arnica flowers are still held higher, with only moderate supply available. Glycerin is not so firm, a falling demand upon the manufacturers, owing to the cancellation of some orders and postponement of delivery on contracts, having occasioned this. Balsam copaiba remains steady, the supply appearing to keep pace with the demand. Balsam Peru varies considerably as to quality. Manna appears still in only moderate supply, with consequent appreciated values. The essential oil market presents no features of interest, nor does camphor, prices ruling about as previously quoted. Golden seal remains at top notch, supplies of satisfactory grades being light. Dandelion is easier, senega slightly higher. Quince seed jumped to a higher figure than for many years, owing to low supplies. Silver nitrate, on account of lower bullion rate, dropped about 15 cents. The principal changes are tabulated below:

Advanced.	**Declined.**
Belladonna leaves	**Arnica flowers**
Coca leaves	**Bluestone**
Oil rose	**Bromides**
Quince seed	**Golden seal**
Turpentine	**Guarana**
	Morphia
	Oil anise
	Oil cubebs
	Opium
	Santonin
	Sarsaparilla, Mexican

ACETANILID. N. Y. Q., 1-lb. cart. incl..	lb	38
Powdr., N. Y. Q., 1-lb. cart. incl.........	lb	38
ACETONE. Technical....................	lb	45
ACID. Acetic No. 8, carboys............	lb	07
1-lb bottles, M. C. W....................	lb	20
5-lb bottles, "	lb	15
Glacial, M. C. W.	lb	44
Acetic, U. S. P. (Sp. gr. 1.028).........	lb	21
Arsenic, Hydrated Pure.................	lb	14
Arsenous, Lumps, Pure	lb	8
Arsenous, Powd., Pure, M. C. W.	lb	8
Benzoic, from Toluol, M.C.W.,1-lb cart.incl	lb	57
Benzoic, from Toluol, M. C. W..........	oz	13
Benzoic, True from Benzoin...........	lb	1 35-1 50
Benzoic, from Tolvol, 1-oz cartons.......	oz	13
Benzoic, from Tolvol, M. C. W..........	lb	55-65
Boracic	lb	16-18
Boracic, powd., M. C. W................	lb	19
Boracic, im. powd., M.C.W., 1-lb cart. incl.	lb	27
Boracic, Squibb's, 1-lb bottle............	lb	45
Boric, H. P.	lb	28
Boric, powd., pure	lb	20
Boric, Impalp., powd.	lb	28
Butyric, 100%	oz	29
Butyric, H. P.	lb	2 14
Cacodylic, ⅛	oz	4 00
Camphoric	oz	40

***Articles quoted in this Journal as M. C. W. are the products of the Mallinckrodt Chemical Works.**

Carbolic, Calvert's No. 1	lb	2 00
Carbolic, Calvert's No. 2	lb	1 50
Carbolic, 1-lb tin, M.C.W., gilt label	lb	28
Carbolic, M.C.W., 5-lb can, gilt label	lb	25
Carbolic, M.C.W., 10-lb can, gilt label	lb	24
Carbolic, M.C.W., 25-lb can, gilt label	lb	22
Carbolic, Loose, crys.	lb	70
Carbolic, Solution, 1-lb. bot	doz	2 50
Carbolic, Crude	gal	40-50
Chromic, 1-oz vials	oz	15
Chrysophanic, true, M. C. W., 1-oz vials	oz	39
Cinnamic, P. W. R	oz	39
Citric, crys.	lb	57-60
Gallic, 1-oz cartons	oz	11
Gallic	lb	70
Hydrobromic, conc., 1-oz vials, M.C.W.	oz	15
Hydrobromic, U. S. P., 10%, M.C.W.	lb	34
Hydrocyanic, 1-oz vials, U.S.P., M.C.W.	oz	10
Hydriodic (Sp. gr. 1-50)	oz	42
Hydriodic (Sp. gr. 1.70)	oz	52
Hydrocyanic, U. S. P., Mallinckrodt's	lb	39
Hydrocyanic, U. S. P., Scheeles's	oz	35
Hydrofluoric, 1s, g. p. bots. incl., M.C.W.	lb	1 30
Hydrofluoric, ½s, g. p. bots. incl. "	lb	1 80
Hydrofluoric, ¼s, g. p. bots. incl. "	lb	2 25
Hydrofluoric, 1-oz g. p. bots. incl. "	lb	37
Hypophosphorous, 50%, 1-lb G. S. B. "	lb	1 24
Hypophosphorous, 50%, 1-oz G. S. B. "	oz	19
Lactic, conc., 1-oz vials, M. C. W	oz	12
Lactic, conc., 1s	lb	79
Lactic, dilute, 1-oz vials, M. C. W	oz	8
Muriatic, carboys	lb	3¼
Muriatic, 6-lb bots	each	75
Muriatic, C. P., 6-lb bots	lb	22
Muriatic, C. P., 1-lb bots	lb	38
Nitric, carboys.	lb	8
Nitric, 7-lb bots	ea	1 10
Nitric, C. P., 7-lb bots	lb	22
Nitric, 1-lb bots.	lb	40
Nitro-Muriatic	lb	40
Nitrous, fuming	lb	65
Oxalic. . .	lb	14-16
Oxalic, chem. pure, M. C. W	lb	30
Phosphoric, glacial	lb	64
Phosphoric, syrupy (85%)	lb	55
Phosphoric, diluted, M. C. W	lb	25
Phosphoric, M. C. W., U. S. P., 50%	lb	40
Phosphoric, glacial, 1-oz vials	oz	11
Phosphoric, glacial, 1s, M. C. W	lb	64
Picric	lb	60-70
Pyrogallic, Resublimated, M. C. W	oz	27
Pyrogallic, 1-lb cans, W. C. W	lb	2 35
Pyrogallic, ½-lb cans, M. C. W	lb	2 45
Pyrogallic, ¼-lb cans, M. C. W	lb	2 55
Pyroligneous	gal	40
Salicylic, 1-lb cartons	lb	46
Salicylic, from Oil Wintergreen	oz	44
Salicylic, Amorph.	lb	46
Succinic, oz bottles	oz	74
Sulphuric, Aromatic	lb	75
Sulphuric, carboys	lb	2-2¼
Sulphuric, 9-lb bottles	each	1 00
Sulphuric, C. P., 9-lb. bottles	lb	22
Sulphuric, C. P., 1-lb bottles	lb	38
Sulphurous, U. S. P., solution	lb	25
Tannic, U. S. P., M. C. W	lb	85-90
Tannic, P. W. R.	lb	1 15
Tartaric, crystallized	lb	39-45
Tartaric, powdered	lb	39-45
Tri-chlor-acetic	oz	32
Valerianic	oz	20
ACONITINE. Amorphous	dr	1 40
Cryst.	dr	1 40
ADAPES LANAE. B. P.	lb	35
AGARIC. White.	lb	45
ALBOLINE.	lb	50
5-lbs	lb	45
Liquid	lb	50
Liquid, 5-lbs	lb	45
AGURIN	oz	1 70
ALBUMEN. Egg.	lb	1 45
ALCOHOL. Absolute.	qt	1 00
94%, 10-gal, case	gal	2 93
94%, 5-gal. case	gal	2 98
Denatured, 5-gal. can	gal	70
Wood, 5-gal. case.	gal	75
Wood, Columbian Spirits, 5 gal. in case	gal	1 02
Wood, Columbian Spirits, barrels	gal	85
Wood, Columbian Spirits, ½ barrels	gal	95
Cologne Spirits, 5 cents advance over price of Alcohol.		
ALDEHYDE. Conct.	oz	25
ALLSPICE. . .	lb	17
Powdered	lb	20
ALMOND MEAL.	lb	45
ALMONDS. Bitter, shelled.	lb	45
Sweet, shelled. .	lb	45
ALOIN. 1-oz vials	oz	16
ALUM. Ammonio-Ferric, M. C. W.	lb	34
Chrome	lb	21
Burnt	lb	15
Ground	lb	7-9
Lump. . .	lb	5-8
Powdered. . .	lb	7-9
ALUMINUM. Aceto-Tartrate, M. C. W.	oz	20
Bromide, M. C. W	oz	29
Chloride, M. C. W.	lb	79
Chloride, M. C. W	oz	14
Hydrated, pure, M. C. W.	lb	79
Metallic, M. C. W.	oz	17
Sulphate, pure, M. C. W.	lb	25-29
ALUMNOL	oz	60
AMIDOL. 1-oz. can	oz	65
AMMONIA. Spirits of	lb	75
Spirits of, aromatic	lb	75
Aqua, 26 deg., 1-lb. bot	lb	20
Aqua, 26 deg., 4-lb bot	lb	16
Aqua, 26 deg., 5 gal. can	lb	11
Aqua, 26 deg., carboy	lb	9½
Aqua, Washing, 5-gal. can	gal	50
AMMONIUM. Acetate, cryst., M. C. W.	oz	14
Arseniate, 1-oz vials, M. C. W.	oz	22
Benzoate, 1-oz vials, M. C. W.	oz	14
Benzoate, M. C. W.	lb	1 14
Bichromate, 1-oz vials, M. C. W.	oz	14
Bromide, 1-oz vials, M. C. W.	oz	10
Bromide, M. C. W	lb	34
Carbonate. . .	lb	15-18
Carbonate, powdered	lb	20
Chloride, see "Muriate."		
Citrate, 1-oz. vials, M. C. W	oz	15
Hypophosphite, 1-oz vials, M. C. W.	oz	21
Hypophosphite, M. C. W.	lb	1 70
Iodide, 1-oz. vials, M. C. W.	oz	38
Muriate, lump.	lb	14-16
Muriate, gran.	lb	10-12
Muriate, gran., pure, 1-lb cartons	lb	20
Muriate, powdered, pure	lb	19
Muriate, Po	lb	17

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Muriate, Po., Squibb's	lb	35
Nitrate	lb	44
Oxalate	lb	52
Phosphate	lb	84
Salicylate	lb	1 10
Salicylate	oz	13
Succinate	oz	1 00
Sulphate, com'l	lb	12
Sulphate, C. P.	oz	29
Sulpho Cyanate, pure	oz	10
Valerianate, cryst., 1-oz vials	oz	24
Valerianate, cryst.	lb	1 75
AMMONOL	oz	1 05
AMYL. Acetate	lb	79
Butyrate, M. C. W.	oz	30
Nitrite	oz	29
Valerianate, M. C. W.	lb	2 59
ANNATTO. Roll	lb	60
ANODYNE. Hoffman's, 1-lb bottle	lb	75
ANTHRASOL	oz	60
ANTIFEBRIN	oz	17
ANTIKAMNIA and its combinations	oz	1 00
10-oz lots for $9.25; 25-oz for $22.80		
Tablets, Vest Pocket	doz	1 75
Tablets, Vest Pocket, 1 gross, 5% off.		
ANTIMONY. Black, powdered, pure	lb	15
Black, powdered, commercial	lb	10
Chloride, cryst., 1-oz vials	oz	22
Chloride, sol. (Butter of)	lb	39
Oxysulphuret (Kermes Mineral)	lb	1 00
Potassium Tartrate, M. C. W	lb	45
Sulphuret, precipitated	lb	92
ANTINOSINE	oz	2 10
ANTIPYRIN. Knorr's	oz	35
New	oz	25
APIOL. Fluid Green	oz	37
APOLSYIN. S. & G.	oz	65
APOMORPHINE. Hydrochlor. Amor., 1/8-oz vial	oz	3 50
Mur. cryst.	oz	8 50
Muriate, Amorphous, 1/8-oz vials, M.C.W.	oz	4 00
ARISTOL	oz	1 80
ARGOLS. Red	lb	15
Red, powdered	lb	20
ARGYROL	oz	1 50
ARROWROOT. St. Vincent	lb	18-20
Taylor's Bermuda, 1/4s and 1/2s	lb	35
Taylor's Bermuda, bulk	lb	35
ARSENIC. Bromide, 1-oz vials, M. C. W.	oz	27
Chloride, sol., M. C. W	lb	30
Iodide, 1-oz vials, M. C. W.	oz	44
Metallic	lb	45
Red, powdered	lb	15
Solution (Donovan's)	lb	40
Solution (Fowler's)	lb	30
Sulphured, red powdered	lb	33
Sulphured, yellow powdered	lb	33
White, lump	lb	30
White, powdered, commercial	lb	18
Yellow (orpiment)	lb	35
ASBESTOS. Fibrous, gro	lb	20
ASPARAGIN. 1/8-oz vials	oz	1 50
ASPIRIN	oz	43
ATROPIA. Pure, 1/8-oz vials	oz	7 35
Sulphate, 1/8-oz vials	oz	6 25
BALSAM. Copaiba, 8-lb can	lb	90
Copaiba, 5-lb bottle	lb	95
Copaiba, 1-lb bottle	lb	1 05
Copaiba, solidified	lb	1 25
Fir, Canada	lb	75-80
Fir, Oregon.	lb	50-55
Gurgun	lb	40
Peru	lb	3 25
Sulphur	lb	60
Tolu	lb	65
BARIUM. Acetate, 1-oz vials, M. C. W.	oz	16
Carbonate, M. C. W.	lb	37
Carbonate, precip.	lb	30
Chloride, chemically pure, M. C. W.	lb	33
Nitrate, M. C. W.	lb	23
Sulphide, commercial, M. C. W	lb	43
Sulphide, pure, M. C. W.	lb	53
Sulphate, M. C. W.	lb	13
BARK. Alder, black, pressed, 1-lb	lb	25
Alder, red or tag, pressed, 1-lb	lb	24
Angostura	lb	30
Ash, black, pressed, 1-lb	lb	20
Ash, mountain, pressed, 1-lb	lb	24
Ash, white, pressed, 1-lb	lb	25
Barberry, pressed, 1-lb	lb	30
Barberry, powdered	lb	35
Bayberry, pressed, 1-lb.	lb	25
Bayberry, powdered.	lb	30
Birch, pressed, 1-lb	lb	24
Black Haw, powdered	lb	35
Black Haw, pressed, 1-lb	lb	30
Black Willow, pressed, 1-lb	lb	25
Blackberry.	lb	20
Buckthorn, pressed, 1-lb	lb	25
Butternut, pressed, 1-lb	lb	25
Calisaya, yellow, commercial.	lb	30
Calisaya, yellow, commercial, powd	lb	32
Calisaya, East India.	lb	42
Calisaya, powdered.	lb	45
Canella	lb	30
Canella, powdered	lb	35
Cascara, Sagrada.	lb	18
Cascara, Sagrada, powdered.	lb	20
Cascarilla	lb	25
Cascarilla, powdered	lb	30
Cassia.	lb	22
Cassia, powdered	lb	25
Cinchona, red.	lb	45-50
Cinchona, red powdered.	lb	45-50
Cinnamon, Ceylon.	lb	40 50
Cinnamon, Ceylon, powdered.	lb	40-50
Cotton Root, powdered.	lb	35
Cotton Root, pressed, 1-lb	lb	35
Cramp, powdered	lb	25
Cramp, pressed, 1-lb	lb	25
Cundurango	lb	45
Cundurango, powdered	lb	50
Dogwood, pressed, 1-lb	lb	20
Dogwood, powdered	lb	25
Elder, pressed, 1-lb	lb	35
Elm, select, slabs.	lb	30
Elm, ground, bulk	lb	30
Elm, powdered	lb	30
Elm, powdered, 1/4s.	lb	30
Elm, powdered, 1/8s.	lb	35
Elm, powdered, ozs	lb	40
Hemlock, pressed, 1-lb.	lb	25
Hemlock, powdered.	lb	30
Jamaica Dogwood, pressed, 1-lb	lb	35
Jamaica Dogwood, powdered, 1-lb	lb	35
Mezereon, pressed, 1-lb	lb	28
Oak, red, pressed, 1-lb	lb	22
Oak, white, powdered.	lb	22

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Oak, white, pressed, 1-lb	lb	22
Poplar, white, powdered, 1-lb	lb	25
Poplar, white, pressed, 1-lb	lb	25
Poplar, yellow, pressed, 1-lb	lb	25
Prickly Ash, powdered	lb	40
Prickly Ash, pressed, 1-lb	lb	33
Quebracho	lb	35
Sassafras. . .	lb	28
Sassafras, powdered	lb	25
Simaruba	lb	50
Soap Tree	lb	10-12
Soap Tree, ground	lb	15
Soap Tree, powdered.	lb	15
Sumac, pressed, 1-lb	lb	25
Tamarac, pressed, 1-lb	lb	25
Wahoo Root, pressed, 1-lb	lb	33
Wild Cherry. .	lb	16
Wild Cherry, ground.	lb	18
Wild Cherry, powdered	lb	20
BAY RUM. Domestic	gal	2 25
Imported	gal	3 00
BEANS. Calabar.	lb	40
Tonka, Angostura	lb	1 35
Vanilla, short, true Mexican	lb	8 50
Vanilla, long, true Mexican	lb	9 50
Vanilla, Tahiti	lb	1 50
BEBEERINE. Pure, 1-oz vials	oz	2 04
Sulphate, 1-oz vials	oz	1 49
BENZOLE. Pure	lb	35
BENZIN. Gallon		30
5 and 10 gallons	gal	25
Pints	doz	1 60
BERBERINE. Hydrochloride	oz	2 55
Sulphate	oz	2 29
BERRIES. Buckthorn	lb	30
Cocculus Indicus	lb	17
Cubeb, stemless	lb	30
Cubeb, powdered	lb	30
Elder	lb	30
Juniper, Italian	lb	10
Poke	lb	25
Prickly Ash.	lb	40
Sumac	lb	25
Sumac, powdered	lb	30
BETOL	lb	60
BISMUTH. Acetate, M. C. W	oz	36
Citrate, M. C. W	lb	2 89
Citrate, M. C. W	oz	26
Citrate and Ammonia, M. C. W	oz	26
Citrate and Ammonia, M. C. W	lb	2 89
Lactate	oz	44
Metallic	lb	2 50
Nitrate, M. C. W	oz	24
Oxide, Hydrated, M. C. W	lb	3 68
Oxide Hydrated, M. C. W	oz	34
Oxychloride, M. C. W	lb	2 73
Salicylate, 40%	oz	23
Salicylate, 64% Basic	oz	25
Salicylate, 64%, M. C. W	lb	2 65
Subbenzoate	oz	32
Subcarbonate	lb	2 67
Subgallate	oz	25
Subiodide, M. C. W	lb	5 09
Subiodide, 1-oz vials, M. C. W	oz	39
Subnitrate, M. C. W	lb	2 37
Subnitrate, N. Y. Q	lb	2 37
Subnitrate, P. W. R.	lb	2 37
Tannic, 1-oz vials, M. C. W	oz	27
Valerianate, ⅛s	oz	62
BLUE MASS	lb	65
Powdered	lb	75
BLUE VITROL. Barrels, 7½	lb	10-14
Powdered	lb	18
BOLE. Armenian	lb	18
BONE ASH	lb	6-8
BORAX. C. P., Squibb's	lb	33
Pacific Coast Borax Co., 1-lb	doz	1 14
Pacific Coast Borax Co., ¾-lb	doz	90
Pacific Coast Borax Co., ¼-lb	doz	48
Powdered	lb	8-10
Pure Granular	lb	25
Refined	lb	8-10
BOROFORMOL. Pints	doz	7 50
BOROGLYCERIDE Solution.	lb	60
BROMOFORM	oz	20
BROMINE	lb	83
Chloride, solution	oz	60
BRUCINE. ⅛-oz vials, M. C. W	oz	1 75
BRUCINE	oz	1 75
Phosphate	oz	1 75
Sulphate, ⅛-oz vials	oz	1 75
BUDS. Balm of Gilead	lb	60
Cassia	lb	50
BUTTER CACAO. Ghirardelli	lb	70
German	lb	72
CADMIUM. Bromide, M. C. W	oz	20
Iodide, M. C. W., 1-oz vials	oz	33
Sulphate, M. C. W., 1-oz vials	oz	25
CAFFEIN. Bromide, 1-oz vials	oz	37
Citrated, M. C. W	oz	28
Citrated, N. Y. Q	oz	28
Pure, N. Y. Q	oz	35
Sulphate, ⅛-oz vials, M. C. W	oz	60
Salicylate, true salt, ⅛s, M. C. W	oz	60
CALAMINE	lb	18
CALCIUM. Bromide, 1-oz vials, M. C. W.	oz	12
Bromide, M. C. W	lb	64
Chloride, fused, M. C. W	lb	64
Chloride, granular, M. C. W	lb	30
Glycerylphosphate	oz	22
Hypophosphite, 1-oz vials.	oz	14
Hypophosphite. .	lb	89
Hypophosphite and Sodium, 1-oz vials	oz	16
Hypophosphite and Sodium, M. C. W.	lb	1 09
Iodide, 1-oz vials, M. C. W	oz	37
Lactophosphate, soluble	lb	1 35
Lactophosphate, soluble	oz	17
Phosphate, precipitated, 1-lb cart	lb	20
Phosphide, 1-oz vials	oz	50
Sulphate, pure	lb	49
Sulphide, 1-oz vials	oz	10
Sulphide	lb	37
Sulphite	lb	84
Sulpho, carbolate, M. C. W	oz	11
CALOMEL. N. Y. Q	lb	1 05
Calomel, P. W. R., 1-lb boxes	lb	1 05
English, Howard's	lb	1 35
CAMPHOR. Monobromated, M. C. W	oz	25
Tar flake.	lb	5-7
Tar balls.	lb	5-7
CANDY. Coltsfoot Rock	lb	30
Horehound. .	lb	12
Rock, on strings	lb	15
Rock, brown	lb	16
Rock, red	lb	15
Rock, white	lb	14
CANTHARIDES. Russian, powdered	lb	1 25
CAPSICUM. African, pods	lb	25
African, powdered	lb	30
Bombay	lb	20

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CARAMEL ....gal, $1.25.	lb		30
CARBON. Bisulphide	lb		30
Bisulphide, 50-lb cans	ea	5	18
Bisulphide, Wheeler's 50-lb can	ea	5	18
Bisulphide, 1-gal cans	gal	1	43
Bisulphide, quart bottles	doz	4	50
CARMINE. No. 40.	oz		40
No. 40.	lb	4	50
CASSIA FISTULA	lb		20
CASTOR FIBER.	oz	1	50
Castor Fiber, powdered	oz	1	75
CERATE. Cantharides	lb	1	00
Goulard's, U. S. P.	lb		70
Resin, U. S. P.	lb		50
Savin	lb		60
Simple	lb		50
Spermaceti	lb		70
Turner's	lb		60
Zinc, Carbonate, true	lb		60
Zinc, Oxide	lb		60
CERIUM. Oxalate	oz		09
Oxalate, 1-lb. cartons	lb		45
CHALK. Crayons, white	lb		15
French, cut	lb		18-20
French, powdered	lb		5-8
Precipitated, English	lb		10-12
Prepared in drops, bulk	lb		7-8
Prepared in drops, 5-lb boxes	lb		8-10
Prepared pink, 8-lb boxes	lb		10
White, in lumps	lb		3-4
CHARCOAL. Animal	lb		8-10
Willow, powdered	lb		15-20
CHINA CLAY	lb		10
CHINESE SHAVINGS	lb		60
CHINOIDINE. 1-oz rolls	oz		12
CHLORAL HYDRATE, CROTON, 1-oz vial incl.	oz		35
Crystals, M. C. W., 1s	lb	1	35
Crystals, M. C. W., ½s	lb	1	45
Crystals, M. C. W., ¼-lb cartons	lb	1	50
Crystals, M. C. W., ozs	lb	2	10
Crystals, 1-lb g. s. b. incl., Schering	lb	1	35
Crystals, ½-lb g. s. b. incl., Schering	lb	1	45
Crystals, ¼-lb g. s. b. incl., Schering	lb	1	55
Crystals, 1-oz g. s. vls. incl., Schering	oz		17
CHLORALAMID	25 gramme		80
CHLOROFORM. 1-lb. tin, N. Y. Q	lb		52
In 7-lb. bottle, N. Y. Q	lb		42
Squibb's, 1-500 gramme	ea.	1	00
CINCHONINE Alk'd pure 1-oz vials M.C.W.	oz		25
Bisulphate, M. C. W.	oz		18
Muriate, M. C. W.	oz		17
Sulphate, 1-oz vials, M. C. W.	oz		17
CINCHONIDINE Alk. pure 1-oz v'ls M.C.W.	oz		50
Bisulphate, 1-oz vials, M. C. W.	oz		30
Muriate, M. C. W.	oz		32
Salicylate, 1-oz vials, M. C. W.	oz		34
Sulphate, 1-oz vials, M. C. W.	oz		30
Sulphate, 5-oz cans, M. C. W.	oz		25
Sulphate, 1-oz vials, P. W. R.	oz		28
CLOVES. Zanzibar	lb		30
Zanzibar, powdered	lb		35
COBALT	lb		25
Cobalt, powdered	lb		30
COCAINE. Alk., M. C. W., 1-oz v'ls, incl.	oz	3	50
Hydrochloride, M. C. W.	oz	2	65
Hydrochloride Cryst., 1-oz v'ls, N.Y.Q.	oz	2	65
Hydrochloride Cryst., ½-oz v'ls, N.Y.Q.	oz	2	80
Hydrochloride Crys., ¼-oz v'ls, N.Y.Q.	oz	2	90
Hydrochloride Cryst., ⅛-oz v'ls, N.Y.Q.	oz	3	05
Hydrochloride, 1-oz vials, P. W. R.	oz	2	65
COCHINEAL. Honduras	lb		60
Honduras, powdered.	lb		65
CODEINE. N. Y. Q., pure	oz	4	95
Muriate, N. Y. Q ...... 1 oz, $4 70	⅛s	4	90
Phosphate, N. Y. Q., ⅛-oz vials	oz	4	65
Pure, M. C. W	oz	4	95
Sulphate, M. C. W	oz	4	70
Sulphate, 1-oz vials, P. W. R.	oz	4	70
COLLODION	lb		70
1-oz vials	doz	1	25
Cantharidal	lb	1	85
Cantharidal, 1-oz vials	doz	1	75
Flexible	lb		70
Flexible, 1-oz vials	doz	1	00
COLCHICINE. Cryst., 15-grain	gr		14
C. P., Amorph., 15-grain vials	gr		30
COLOCYNTH. Apples, Trieste	lb		60-65
Apples, powdered	lb		75
COMPOSITION POWDER, 2-oz papers	lb		35
CONFECTION. Aromatic	lb	1	00
Opium	lb	1	50
Rose, U. S. P.	lb		65
Senna, U. S. P.	lb		70
Theriac	lb	1	25
COPPER. Acetate, cryst., C.P., M.C.W.	lb		74
Acetate, com'l, lump	lb		40
Acetate, Po. Verdigris	lb		45
Ammoniated	lb		59
Arsenite, 1-oz vials, M. C. W.	oz		19
Arsenite, 1-oz vials	oz		19
Bromide	oz		32
Carbonate	lb		38
Nitrate	lb		54
Sulphate, C. P., granulated, 1-lb. boxes	lb		23
Sulphate, Caustic Pencils	doz	1	75
Sulphate, purified, 1-lb cartons	lb		21
COPPERAS. bbls 1¼	lb		3-4
CORROSIVE SUBLIMATE. N. Y. Q.	lb		95
Powdered, N. Y. Q	lb		95
1-lb boxes, P. W. R.	lb		95
COTOIN. Para, ⅛-oz	oz	14	00
COTTON. Negative.	oz		60
COWHAGE. 1-oz cans	oz		55
CREAM TARTAR, pure, powdered	lb		34-37
Pure, powdered, 25-lb box	lb		30
CREOLIN. ½-lb	doz	4	00
1-lb	doz	8	00
CREOSOTE. Beechwood	lb		94
½-lb	lb	1	10
¼-lb	lb	1	20
CREOSOTE CARBONATE	oz		65
In ¼-lb	lb	9	25
In ½-lb	lb	9	15
In 1-lb	lb	9	10
CROCUS MARTIS	lb		16
CUDBEAR	lb		30
CUMARIN	oz		45
CUMENE (Cumol)	lb	1	10
CURCUMA. Powdered	lb		16
CUTTLEFISH	lb		35
Jeweler's	lb		85
Powdered	lb		30
DATURINE. Alk., cryst., 5-gr	ea		75
DEXTRIN.	lb		12-15
DIASTASE. of Malt	oz	1	14
DIGALEN. ½-oz bottles	ea	1	00
DIGITALIN. ⅛-oz vials	oz	5	75
DIONIN. ⅛s.	oz	6	25
15-gr vials	ea		35

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DOVER'S POWDER, U. S. P	lb	1 70
DRAGON'S BLOOD, Mass.	lb	55
Powdered	lb	85
Reed's.	lb	85
DIURETIN.	oz	1 80
DUBOISINE. Sulphate, 10-gr vial		1 10
EARTH, Fuller's, powdered.	lb	8-10
EIKONOGEN, lb, $3.95; ½s, $4.20	oz	37
¼s.	lb	4 80
ELATERIN. 15-gr vial		1 25
ELATERIUM, ⅛-oz vials	oz	2 25
EMERY. Flour.	lb	10-12
Grain.	lb	10-12
EMETIN (Resinoid)	oz	7 53
(Alkaloid), pure, 15-gr vial		1 25
ERGOT. Spanish.	lb	65
Spanish, powd	lb	65
ERGOTIN. Bonjean	oz	39
ERGOTOLE. S. & D	doz	4 50
ESERINE (Physostigmine), 5-gr Alkaloid	gr	13
Sulphate, 5-gr vials	ea	50
Sulphate, 10-gr vials	ea	1 00
Sulphate, 15-gr vials	ea	1 50
ETHER. Acetic, M. C. W., 1-lb. bot	lb	61
Benzoic, 1-oz bot.	oz	34
Butyric, 1-lb bot	lb	1 25
Chloric, U. S. P., M. C. W., 1-lb bot	lb	64
Chloric, concent., M. C. W., 1-lb bot	lb	74
Formic, 1-lb bot.	lb	1 59
Hydrobromic, 1-oz bot.	oz	20
Nitrous, conc., M. C. W., ¼-lb bot	lb	1 20
Nitrous, conc., M. C. W., ½-lb bot	lb	1 10
Nitrous, conc., M. C. W., 1-lb bot	lb	1 00
Nitrous Spirit, 4-lb bot.	lb	58
Sulphuric, U.S.P., Mallinckrodt's, 1-lb can	lb	41
Sulphuric, U.S.P., Mallinckrodt's, 3-lb can	lb	37
Sulphuric, U.S.P., ¼-lb cans, P.W.R	lb	58
Sulphuric, U.S.P., 1-lb cans, P.W.R	lb	41
Sulphuric, washed, 1-lb bot	lb	42
Sulphuric, Squibb's, in 1-500 gm cans	ea	88
Sulphuric, Squibb's, in 1-250 gm cans	ea	49
Sulphuric, Squibb's, in 1-100 gm cans	ea	22
Valerianic	oz	30
ETHYL. Bromide	oz	20
Chloride, 10 gramme tubes Bengue	doz	5 00
Chloride, 30 gramme tubes Bengue	doz	10 00
Chlodire, 10 gramme	ea	40
Iodide (see Hydriodic Ether)	oz	54
EUCALYPTOL	oz	16
EUCAINE. A or B, ⅛s	oz	3 60
EUDOXINE.	oz	2 10
Tablets, 3-gr.	oz	2 60
Tablets, 5-gr.	oz	2 50
Tablets, 1-3 gr, ¼-oz bots	oz	3 00
EUKATROL, powd	oz	1 00
Tablets	oz	1 00
EUROPHEN.	oz	1 80
EXALGINE.	oz	1 50
EXTRACT. Licorice, Corigliano.	lb	45
Licorice, Mellor & Rittenhouse	lb	27-30
Licorice, M. & R., 25 and 50-lb box	lb	26
Licorice, soft, perf., clearly soluble	lb	75
Licorice, Y. & S	lb	27-30
Licorice, powd.	lb	35
Logwood, bulk	lb	15
Logwood, ¼s.	lb	20
Logwood, ½s.	lb	18
Logwood, 1s.	lb	16
Male Fern, U. S. P	lb	2 25
Malt, dry	lb	1 25
Witch Hazel	gal	80-90
Witch Hazel, 5-gal kegs, Dickenson's	gal	1 05
Witch Hazel, 10-gal kegs, Dickenson's	gal	1 00
FAREOL.	oz	50
FENETOLE	lb	2 00
FERRATIN. Powder or tablets	oz	85
FLAKE WHITE. English.	lb	15
FLOUR. Gluten.	lb	15
Rice.	lb	12
FLOWERS. Althea.	lb	40
Arnica	lb	20-22
Arnica, powd.	lb	25
Calendula, new	lb	90
Chamomile, German, new	lb	35
Chamomile, Roman	lb	40
Elder	lb	30
Elder, pressed.	oz	25
Kooso.	lb	75
Kooso, powd.	lb	80
Lavender.	lb	35
Mullein	lb	1 00
Orange	lb	1 10
Poppy, red.	lb	75
Rose, red.	lb	1 20
Rosemary.	lb	35
FLOUR SPAR. Powdered	lb	25
FORMALDEHYDE	lb	32
5-lb bot.	lb	25
FORMALIN. S. & G.	lb	40
FORMIN	oz	18
GADUOL	oz	37
GAMBIER.	lb	15
GARANTOSE. 550 times sweeter than sugar.		
1-lb cans	lb	2 25
1-oz cans	oz	20
GELATIN. Cooper's, 12-lb case	lb	65
Coxe's.	doz	1 50
French Pink.	lb	75
French Gold Label.	lb	55
French Silver Label	lb	40
GLASS. Powdered.	lb	15
Soluble.	lb	25
GLUCOSE. 1-lb bot	lb	20
GLUE. Common.	lb	15
White, No. 1.	lb	25
GLUTOL	oz	65
GLYCERINE. Price's.	lb	70
Pure, in 10-lb cans	lb	22
Pure, in 50-lb cans	lb	19½
GLYCEROPHOSPHATES. Iron	oz	32
Lime	oz	22
Potash	oz	29
Soda	oz	28
GLYCYRRHIZIN. Ammoniated	oz	26
GOLD and Sod. Chlo., 15-gr v'ls, M.C.W.	doz	2 70
And Sodium Chlor, 15-gr vials, P.W.R.	doz	3 30
Chloride, 15-gr vials, M. C. W	doz	5 10
Chloride, 15-gr vials, P. W. R	doz	5 10
Mono-bromide, 15-gr vials	ea	1 25
Tri-bromide, 15-gr vials	ea	1 00
Tri-cyanide, 15-gr vials	ea	2 00
GOOSE GREASE.	lb	60
GRAINS. Paradise.	lb	40
Powdered.	lb	45
GUAIACOL. Carb.	oz	1 50
Merck's.	oz	18
GUARANA. Powd	lb	2 75
GUM. Aloes, Barbadoes	lb	50
Aloes, Barbadoes, powd	lb	55

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Aloes, Cape.	lb	20
Aloes, Cape, powd	lb	20-25
Aloes, Socotrine	lb	40
Aloes, Socotrine, powd	lb	40
Ammoniac tears.	lb	40
Arabic, Turkey, first pick	lb	55
Arabic, Turkey, second pick	lb	40
Arabic, Turkey, sifted sorts.	lb	20
Arabic, first pick, granulated	lb	58
Arabic, first pick, powd	lb	60-65
Asafoetida, Calcutta.	lb	40
Asafoetida, powd.	lb	45
Asphaltum.	lb	15
Benzoin, marble, select.	lb	50
Benzoin, powd.	lb	55
Camphor, bulk	lb	90
Camphor, 1-oz blocks	lb	93
Camphor, 24 to lb	lb	93
Camphor, powd.	lb	1 10
Catechu, refined.	lb	18
Catechu, powd.	lb	30
Copal	lb	35
Damar.	lb	38
Galbanum.	lb	1 00
Gamboge	lb	1 10
Gamboge, powd.	lb	1 15
Guaiac.	lb	35
Guaiac, powd.	lb	40
Kino, true.	lb	75
Kino, true, powd	lb	80
Mastic tears	lb	80
Myrrh, Turkey.	lb	35
Myrrh, Turkey, powd	lb	40
Olibanum tears	lb	30
Opium	lb	6 25
Opium, powd	lb	7 25
Sandarac.	lb	45
Scammony, Aleppo.	oz	40
Scammony, Virgin, true	oz	75
Shellac, bleached.	lb	75
Shellac, orange.	lb	70
Shellac, ground.	lb	75
Spruce	lb	1 50
Tamarac, true.	lb	1 25
Thus.	lb	12
Tragacanth, ribbon.	lb	90
Tragacanth, powd.	lb	80
GUTTA PERCHA. Crude, shavings	lb	1 75
Crude, sheets.	lb	1 75
HEDONAL.	oz	1 60
HEMICRANIN	oz	90
HEMOGALLOL	oz	80
Tablets	100	80
HEROIN. 1-oz.	oz	6 70
½-oz vial	oz	6 85
¼-oz vial	oz	7 00
15-gr vial	ea	29
Hydrochloride, oz vial	oz	6 70
½-oz vial	oz	6 85
¼-oz vial	oz	7 00
15-gr vial	ea	29
HEXAMETHYLENAMINE	lb	1 45-1 60
"	oz	16
HIERA PICRA.	lb	50
HOFFMAN'S ANODYNE.	lb	75
HOMATROPINE, Alk'l'd, 5-gr vials	ea	2 25
HOMATROPINE. Alk'l'd, 5-gr vials	ea	2 25
Hydrobromate, 5-gr vials	ea	1 75
Hydrochlorate, 5-gr vials	ea	2 10
HOMOGLOBIN. Powd	oz	1 04

HOPS, new, bulk.	lb	37
New, ozs.	lb	50
New, ¼s, ½s.	lb	40
HYDROCHINON	oz	18
	lb	1 42
HYDROGEN PEROXIDE, Drevet's U.S.P.,		
1-lb bots.	doz	3 00
Drevet's U.S.P., ½-lb bots	doz	1 90
Drevet's U.S.P., ¼-lb bots	doz	1 40
Marchand's, 1-lb bots	doz	8 00
Marchand's, ½-lb bots	doz	5 25
Marchand's, ¼-lb bots	doz	3 80
Marchand's, ⅛-lb bots	doz	2 25
M. C. W., 1-lb bots	doz	3 00
M. C. W., ½-lb bots	doz	1 80
M. C. W., ¼-lb bots	doz	1 20
Oakland, 1-lb bots	doz	6 50
Oakland, ½-lb bots	doz	4 00
Oakland, ¼-lb bots	doz	2 25
Oakland, 5-lb bots	ea	1 59
HYDRO NAPHTHOL.	oz	75
HYDRASTINE. Alkaloid	oz	10 04
Hydrochloride	oz	20 00
HYDRASTININE. Hydrochloride, 15-gr vls.	ea	3 00
HYDROQUINONE	oz	18
HYOSCINE. Amorphous, 15-gr vials	ea	2 00
Hydrobromate, 5-gr vials	ea	2 00
Hydriodide, 5-gr vials	ea	2 00
Sulphate, 5-gr vials	ea	2 00
HYOSCYAMINE. Alkaloid, crys. 15-gr vls.	ea	4 75
Amorphous	gr	25
Hydrobromate, Amorph., 15-gr	ea	3 00
Sulphate, crys., 15-gr	ea	3 03
Sulphate, Amorph., 5-gr vials	ea	1 25
IATROL.	oz	95
ICHTHARGAN	oz	3 00
ICHTHORFORM	oz	1 00
ICHTHYOL, 1-oz vials	oz	32
¼s	oz	4 25
½s	oz	4 10
1s	oz	4 00
INDIGO, Manila, extra	lb	75
IODIPIN (10% Iodized Sesame oil)	oz	28
IODINE, Bromide, 1-oz vials, M.C.W	oz	47
Chloride, 1-oz vials, M.C.W	oz	52
Resublimed, 1-oz vials, M. C. W	oz	35
Resublimed, M. C. W	lb	3 43
Resublimed, N. Y. Q	lb	3 33
Resublimed, 1-lb bot., P. W. R	lb	3 33
Burnham's, soluble.	oz	1 00
IODOFORM, bulk, M. C. W	lb	3 85
Iodoform, 1-lb bot, N. Y. Q	lb	3 83
Iodoform, 1-lb bots., P. W. R	lb	3 83
Cryst. or powd	oz	34
Deodorized.	oz	54
IODOL.	oz	1 25
IRON, Acetate, dry, 1-oz vials, M.C.W	oz	24
Acetate, liquor.	lb	44
Albuminate.	oz	20
Ammoniated, M. C. W	lb	44
And Ammonium Cit	lb	75
Arseniate, 1-oz vials.	oz	18
By Hydrogen	lb	60
Carbonate, precipitated.	lb	18
Carbonate, proto.	lb	42
Carbonate, saccharated.	lb	45
Chloride, 1-oz vials	oz	8

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Chloride, crystal.	lb	34
Chloride, sol. for tincture	pt	35
Citrate, soluble, 1-oz vials	oz	13
Citrate, soluble, N. Y. Q.	lb	75
Citrate, soluble, M.C.W.	lb	75
Citrate and quinine, N. Y. Q.	lb	2 00
Citrate and Quinine, sol., M. C. W.	lb	2 00
Citrate and Quinine with Strych., M.C.W.	lb	2 55
Citrate and Quinine with Strych., M.C.W.	oz	26
Citrate and Strychnine, 1-oz vials, M.C.W.	oz	13
Ferrocyanide, 1-oz vials, M. C. W.	oz	10
Ferrocyanide, M. C. W.	lb	65
Filings	lb	16
Glycerino Phosphate.	oz	32
Hypophosphite, 1-oz vials, M. C. W.	oz	20
Iodide, 1-oz vials, M. C. W.	oz	36
Lactate, 1-oz vials, M. C. W.	oz	10
Lactophosphate, 1-oz vials, M. C. W.	oz	19
Nitrate, sol., U. S. P., M. C. W.	lb	34
Oxide, black.	lb	49
Oxide, brown, com'l	lb	22
Oxide, brown, pure	lb	74
Peptonized	oz	24
Phosphate, precipitate.	lb	39
Phosphate, U. S. P., scales, N. Y. Q.	oz	13
Phosphate, U. S. P., scales, N. Y. Q.	lb	75
Pyrophosphate, soluble, N. Y. Q.	lb	75
Pyrophosphate, U. S. P., 1880, N. Y. Q.	oz	13
Pyrophosphate, U. S. P., 1880, N .Y. Q.	lb	75
Reduced (Quevenne's)	lb	58
Reduced (Quevenne's)	oz	10
Salicylate, 1-oz vials, M. C. W.	oz	15
Subsulphate, M. C. W.	oz	6
Subsulphate, M. C. W.	lb	36
Subsulphate, sol., M. C. W.	lb	23
Succinate	oz	60
Sulphate, dried.	lb	20
Sulphate, gran., pure	lb	18
Sulphate, pure, cryst., M. C. W.	lb	20
Sulpho-Carbolate, 1-oz vials, M. C. W.	oz	13
Tannate, 1-oz vials, M. C. W.	oz	22
Tartrate and Ammonia, M. C. W.	oz	11
Tartrate and Ammonia, M. C. W.	lb	72
Tartrate and Potassium, M. C. W.	oz	10
Tartrate and Potassium, scale, M. C. W.	lb	58
Tersulphate, sol., U. S. P.	lb	40
Valerianate.	oz	22
IODOTHYRINE.	oz	3 40
ISINGLASS, American	lb	1 05
Russian.	lb	5 25
KAMALA.	lb	65
Powd.	lb	75
KAOLIN	lb	10
KERATIN (Pepsinized), ⅛s	oz	3 53
KOUSSO.	lb	75
Powd.	lb	75
KRYOFINE.	oz	1 00
LACTUCARIUM	oz	80
LACTOPHEPIN.	oz	1 00
LANOLIN.	lb	80
Lanae Adeps, 1-lb cans, B. J. D.	lb	35
Lanae, British.	lb	35
LANUM (Adeps Lanae Hydrosus)	lb	40
LARD, Benzoated, 5-lb cans	lb	27
LARGIN	oz	1 75
LEAD. Acetate, med. crys. or gran	lb	33
Acetate, white.	lb	18
Acetate, white, powd	lb	25
Acetate, purified, gran., 1-lb cart., M.C.W.	lb	33

Bromide.	oz	24
Carbonate	lb	12
Chloride, 1-oz vials	oz	11
Chromate, M. C. W.	lb	1 19
Iodide, 1-oz vials, M. C. W.	oz	27
Nitrate, 1-lb boxes, M. C. W.	lb	23
Nitrate, chemically pure, M. C. W.	lb	40
Oxide, chemically pure, M. C. W.	lb	84
Oxide	lb	84
Subacetate, sol.	lb	35
Sulphate, pure, M. C. W.	lb	63
Tannate, 1-oz vials, M. C. W.	oz	24
LEAVES, Aconite, German	lb	30
Aconite, powd.	lb	30
Aconite, pressed.	oz	25
Angelica, pressed.	oz	25
Bay, bulk.	lb	15
Belladonna, English, bts	lb	1 25
Belladonna.	lb	30
Belladonna, powd.	lb	35
Belladonna, pressed.	oz	35
Blessed Thistle, pressed	oz	34
Borage, pressed.	oz	35
Buchu, long.	lb	55
Buchu, short.	lb	40
Buchu, powd.	lb	40
Buckbean, pressed	oz	30
Cocoa	lb	45
Conium.	lb	30
Conium, powd.	lb	35
Conium, pressed.	oz	30
Coltsfoot, pressed.	oz	25
Damiana	lb	30
Digitalis, pressed.	oz	35
Digitalis.	lb	35
Digitalis, powd.	lb	35
Eucalyptus.	lb	20
Grindelia Robusta	lb	25
Grindelia Squarosa	lb	40
Hemlock, pressed.	oz	30
Henna.	lb	50
Henna, powd.	lb	55
Henbane.	lb	30
Henbane, powd.	lb	30
Henbane, pressed, oz.	lb	30
Jaborandi.	lb	35
Jaborandi, powd.	lb	40
Laurel.	lb	25
Lovage, pressed, oz	lb	30
Lungwort, pressed, oz	lb	34
Marjoram, sweet	lb	36
Rosemary, bulk.	lb	20
Rosemary, pressed, oz.	lb	25
Sage, oz.	lb	25
Savin, pressed, oz	lb	25
Senna, Alexandria, garbeled	lb	30
Senna, Alexandria, powd.	lb	30
Senna, Tinnevelly, select	lb	25
Stramonium, powd.	lb	30
Stramonium, pressed, oz	lb	25
Thyme, pressed, oz	lb	25
Uva, Ursi.	lb	20
Witch Hazel, pressed, oz	lb	25
LEECHES.	ea	10
2 dozen lots	ea	8
LEPTANDRIN.	oz	35
LIME, Chloride, 35-lb cans	lb	5
Chloride, in bbls of 350 lbs	lb	2¾
Chloride, lb cans	doz	90
Chloride, ½-lb cans	doz	65

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Chloride, ¼-lb cans	doz	45
LITHARGE.	lb	12
LITHIUM, Benzoate, 1-oz vials, M.C.W.	oz	15
Bromide, 1-oz vials, M. C. W	oz	22
Carbonate, M. C. W	oz	17
Citrate, 1-oz vials, M. C. W	oz	17
Iodide	oz	37
Salicylate, 1-oz vials, M. C. W	oz	15
LITMUS.	lb	50
Paper.	doz	50
LODESTONE.	lb	75
LONDON PURPLE.	lb	20
LOSOPHAN.	oz	1 80
LUPULIN, German.	lb	75
LYCOPODIUM.	lb	75
LYCETOL.	oz	4 25
LYSOL, 1-gal. jugs	gal	4 00
Pints.	doz	8 00
MACE	lb	75
Powd.	lb	75
MADDER, Dutch.	lb	15
MAGNESIUM, Benzoate, M. C. W	oz	24
Bromide, Mallinckrodt's.	oz	25
Calcined, Jennings', 1-lb cans	lb	85
Calcined, K. & M.'s, 1-lb cans	lb	75
Calcined, K. & M.'s, heavy	lb	80
Carbonate, Jennings', 2-oz	lb	35
Carbonate, Jennings', 4-oz	lb	35
Carbonate, K. & M.'s, 1-oz	lb	27
Carbonate, K. & M.'s, 2-oz	oz	23
Carbonate, K. & M.'s, 4-oz	lb	23
Carbonate, K. & M.'s, small sq	lb	60
Carbonate, powd., in 65-lb bbls	lb	13
Carbonate, powd., in 10-lb boxes	lb	16
Citrate, dry, English	lb	65
Citrate, sol.	doz	1 75
Gylcerinophosphate	oz	44
Hypophosphite, 1-oz vials, M. C. W	oz	20
Hypophosphite, M. C. W	lb	1 69
Hypophosphite	oz	20
Iodide, M. C. W	oz	47
Sulphite, M. C. W	lb	49
MANGANESE, Black, Oxide	lb	8-10
Phosphate, M. C. W	oz	18
Carbonate, 1-oz vials, M. C. W	oz	14
Chloride, 1-oz vials, M. C. W	oz	14
Hyposphite, 1-oz vials, M. C. W	oz	20
Hypophosphite	oz	20
Iodide, 1-oz vials, M. C. W	oz	47
Peptonized	oz	29
Phosphate, M. C. W	oz	18
Sulphate, 1-oz vials, M. C. W	oz	9
MANNA. Large flake	lb	1 15
Small flake	lb	75
MENTHOL	lb	3 40
Cryst., 1-oz vials, Mallinckrodt's	oz	30
Crystallized	lb	3 50
MERCURY. Chloride	lb	99
Ammoniate,d white precip.	lb	1 25
Bisulphate	lb	76
Cyanide	oz	31
Iodide, green, 1-oz vials, M. C. W	oz	24
Iodide, red, 1-oz vials, M. C. W	oz	26
Iodide, yellow, 1-oz vials, M. C. W	oz	24
Nitrate, proto., 1-oz vials, M. C. W	oz	27
Nitrate, solution, 1-oz vials	oz	27
Oxide, black, 1-oz vials	oz	18
Oxide, red (red precip.)	lb	1 20
Oxide, yellow, 1-oz vials	oz	19
Salicylate, M. C. W	oz	27

Subsulphate, 1-oz vials.	oz	15
Subsulphate	lb	1 12
Sulphuret, black.	lb	78
White Chalk, 1-lb cartons	lb	46
METHYL, SALICYLATE.	lb	80
METHYLENE. Blue Medicinal	oz	45
MILK SUGAR, Cryst	lb	33
Powdered, bulk	lb	23
M. C. W., 1-lb cartons	lb	25
MORPHINE. Sulphate, ⅛s, 1-oz box, M. C. W.	oz	3 55
Sulphate, 1⅛s, 2½-oz box, M. C. W	oz	3 50
Sulphate, 1-oz vials, M. C. W	oz	3 30
Sulphate, 5-oz can, M. C. W	oz	3 25
Sulphate, 1⅛s, 1-oz box, N. Y. Q	oz	3 55
Sulphate, 1⅛s, 2½-oz box, N. Y. Q	oz	3 50
Sulphate, 1-oz vials, N. Y. Q	oz	3 30
Sulphate, ⅛s, 2½-oz box, P. W. R	oz	3 50
Sulphate, 1-oz bot, P. W. R	oz	3 30
In 10-oz lots, 10c oz less.		
Morphia, Acetate, ⅛s, M. C. W	oz	4 00
Morphia, Muriate, ⅛s, M. C. W	oz	4 00
Morphia, Valerianate, ⅛s, M. C. W	oz	5 00
Other salts or Morphine subject to market price based on above.		
MOSS, Iceland.	lb	18
Irish.	lb	15
Irish, bleached.	lb	20
MUSK, Chinese	oz	40
Tonquin, grain	dr	3 25
MUSTARD, Colman's, 4-oz cans	doz	1 75
Colman's, 5-lb cans	lb	50
Ground, Domestic, 5-lb cans	lb	18
NAPHTHALIN, Balls.	lb	5-7
Resublimated	lb	27
Pure, 1-lb cartons, M. C. W	lb	27
NAPHTHOL, Alpha.	oz	30
Beta.	oz	10
NICKEL. Bromide	oz	32
Bromide, 1-oz vials, M.C.W	oz	29
Nickel and Ammonia Sulphate, M. C. W.	lb	34
Sulphate, 1-oz vials, M. C. W	oz	9
Sulphate	oz	10
NOSOPHEN.	doz	4 50
NUTGALLS, Aleppo.	lb	30
Aleppo, ground.	lb	35
Aleppo, powd.	lb	35
NUTMEGS, Macassar, large	lb	60
Penang, powd.	lb	65
NUTS, Areca	lb	30
Areca, powd.	lb	40
Kola.	lb	35
Kola, powd.	lb	40
NUX VOMICA.	lb	25
Powdered or rasped	lb	25
OAKUM	lb	15
Surgeon's.	lb	20
OIL, Almonds, Bitter, true, Merck's	lb	6 59
Almonds, Bitter, Allen's	oz	75
Almonds, Sweet, Allen's	lb	75
Almonds, Sweet	lb	50-65
Amber, rectified.	lb	60
Anise	lb	1 75-2 00
Bay Leaves, true	oz	35
Bay Leaves	lb	3 75-4 00
Benne	gal	1 20
Bergamot	lb	4 75-5 00
Birch Tar, rectified	lb	1 25
Cade	lb	50
Cajuput (21-oz bottles)	lb	1 10-1 35
Calamus.	oz	45

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Camphor, E. I.	lb	45
Caraway, seed.	lb	2 25
Cardamon.	oz	2 50
Cassia	lb	1 85-2 00
Castor, Baker's A. A	gal	1 38-1 50
Castor, Marsh's	gal	1 34-1 45
Castor, 2-oz bottles	doz	85
Castor, 4-oz bottles	doz	1 25
Castor, 6-oz bottles	doz	1 75
Castor, 8-oz bottles	doz	2 25
Castor, 12-oz bottles	doz	2 50
Castor, 16-oz bottles	doz	3 75
Cedar	lb	60-100
Cedrat.	oz	40
Celery.	oz	1 40
Chamomile, German.	oz	5 00
Chamomile, Roman.	oz	1 75
China, Nut.	gal	1 00
Cinnamon, Ceylon.	oz	90
Citronella	lb	75-85
Cloves	lb	1 40-1 65
Cocoanut	lb	20-25
Codliver, White, Norwegian	gal	1 65
Codliver, white, Norwegian, 5-gal cans	gal	1 50
Cognac, green.	oz	2 50
Cologne.	oz	50
Copaiba	lb	1 75
Coriander.	oz	90
Cotton Seed (salad), 5-gal can	gal	95
Cotton Seed (salad), 1-gal can	gal	1 20
Croton, 24-oz bots	lb	1 50-1 65
Croton	oz	20
Cubebs	lb	2 00-2 25
Ergot, Keith's.	oz	57
Erigeron, Keith's.	oz	38
Erigeron	lb	2 75
Eucalyptus	lb	85
Fennel Seed	lb	2 25
Fusil, purified.	lb	80
Geranium, Rose, Chris	oz	75
Hemlock	lb	85
Hydrocarbon.	gal	1 25
Jasmin, alcoholic.	lb	3 00
Juniper Berries.	lb	1 25-1 50
Juniper, wood.	lb	75
Lard.	gal	1 10
Laurel, expressed.	lb	60
Lavender, Flowers	lb	3 85
Lavender, Garden	lb	1 25
Lemon	lb	2 00
Lemon, Sanderson's	lb	2 25
Lemon, Grass	lb	2 25
Linseed, raw	gal	74
Linseed, raw, case	gal	67
Linseed, boiled	gal	74
Linseed, boiled, case	gal	69
Mace, expressed.	lb	1 75
Male Fern, ethereal.	oz	35
Myrbane.	lb	40
Mullein	oz	45
Musk, alcoholic.	oz	1 00
Mustard, essential.	oz	50
Mustard, expressed.	gal	90
Neatsfoot, No. 1.	gal	90
Neroli, Petal.	oz	3 00
Neroli, Bigarade.	oz	5 75
Neroli, Petit Grain.	oz	55
Nutmegs, essential.	oz	35
Olive, pure, Malaga	gal	1 25
Olive, California	gal	2 75
Olive, ½-gals.	gal	3 00
Olive, small	doz	3 75
Olive, large.	doz	7 50
Olive, imported.	gal	2 00-2 10
Orange, bitter.	lb	4 50
Orange, sweet	lb	3 25
Origanum, pure.	lb	60
Origanum, Chris.	lb	1 85
Palm.	lb	25
Patchouly	oz	75
Pennyroyal	lb	4 00
Pepper, black.	oz	20
Peppermint, Hotchkiss	lb	3 25-3 50
Peppermint, Wayne Co.	lb	2 75-3 00
Peppermint, Western	lb	2 75-3 00
Pimento.	oz	30
Pinus, Sylvestris, German.	lb	1 50
Pinus, Pumilio.	lb	4 50
Pinus Pumilio.	oz	40
Rhodium	oz	35
Rose, Kizanlik	oz	7 50
Rosemary, flowers.	lb	1 25-1 50
Rue	oz	40
Sandalwood, English.	lb	5 50
Sandalwood, German.	lb	3 00-3 20
Sassafras.	lb	90-1 00
Savin.	lb	1 75
Spearmint	lb	3 25
Sperm	gal	1 00
Spike.	lb	35
Spruce	lb	85
Tansy	lb	5 50
Tar	lb	25
Thyme, white.	lb	1 50
Turpentine, pure.	lb	55
Wine, light.	oz	40
Wine, heavy.	oz	50
Wintergreen	lb	4 00-4 25
Wormseed	lb	3 75-4 00
Wormwood	lb	5 25
Ylang Ylang.	oz	4 50
OINTMENT, Basilicon.	lb	65
Citrine.	lb	65
Iodine	lb	1 25
Mercurial, ½ m.	lb	65
Mercurial, ⅓ m.	lb	55
Stramonium.	lb	75
Tar	lb	50
Zinc, benzoated.	lb	65
Zinc, oxide.	lb	65
OPIUM, powd. or gran., P. W. R.	lb	9 46
ORTHOFORM.	oz	1 40
PANCREATIN. Pure	oz	44
Pure, scales, P. D. & Co	oz	50
PAPAIN, Boehringer.	oz	75
PARAFFINE, refined.	lb	12-15
PARALDEHYDE	lb	99
	oz	14
PARIS GREEN.	lb	38-42
PASTILLES, Fumigating, black	lb	50
Fumigating, red	lb	50
PEARL ASH.	lb	8-10
PEEL, Orange, sweet, ground	lb	20
Orange, bitter, coarse	lb	20
Orange, bitter, powdered	lb	20
Orange, sweet, quarters	lb	20
PELLETIERINE, Sulphate, 15-gr vial		1 75
Tannate, 15-gr vial		35
PEPPER, black, Singapore, sifted	lb	30
Black, powd.	lb	30

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White.	lb	40
White, powd.	lb	40
PEPSIN, pure, U. S. P	lb	4 50
Powd. or scales.	lb	4 50
Powd., Ph. G. III	oz	25
PEPTONE, Merck's, dry, from meat	oz	34
PETROLATUM, 1-lb cans	doz	2 00
50-lb pails.	lb	7
25-lb pails.	lb	7½
10-lb cans.	lb	9
5-lb cans.	lb	10
Snow White, 50-lb pails	lb	15½
Snow White, 25-lb pails	lb	16½
Snow White, 10-lb cans	lb	18
Snow White, 5-lb cans	lb	25
Snow White, 1-lb cans	lb	30
PHENACETINE.	oz	33
PHENILINE.	oz	1 00
PHENOLPHTHALEIN	oz	34
PHOSPHORUS, 1-lb cans	lb	85
½-lb cans	lb	95
¼-lb cans	lb	1 05
Amorphous.	lb	1 44
PIPERAZIN, Schering's 10-gm vials	bot	1 50
½-oz and 1-oz	oz	4 25
PIPERIN, 1-oz vials, Mallinckrodt's	oz	62
PIPE CLAY.	lb	12
PITCH, Burgundy	lb	15
PITH, Sassafras.	lb	1 50
PLATINUM and Barium Cyanide, cr	gr	15
Chloride	oz	17 00
Chloride, solution, 10%	oz	2 82
PODOPHYLLIN	oz	30
POPPY HEADS, German.	lb	30
POTASH, Babbitt's, 4 doz in case	case	3 40
Caustic, pure, by alcohol	lb	60
Caustic, white.	lb	37
Caustic, 10-lb cans	lb	10-12
Solution (liq. potass.)	lb	35
POTASSIUM. Acetate, M. C. W., 1-lb	lb	42
Antimonate	lb	1 09
Arseniate, 1-oz vials	oz	14
Bicarbonate, cryst., M. C. W	lb	20
Bicarbonate, granulated, M. C. W	lb	20
Bicarbonate, powd.	lb	20
Bichromate	lb	18-20
M. C. W.	lb	34
Bromide, crys. or gran., M. C. W	lb	27-30
Carbonate, purified, M. C. W	lb	41
Carbonate, bulk.	lb	15
Caustic, pure	lb	37
Caustic, C. P.	lb	2 59
Chlorate, cryst.	lb	16-18
Chlorate, gran., pure, M. C. W	lb	22
Chlorate, powd.	lb	16-18
Chloroplatinite, M. C. W., 15-gr vials	each	80
Chromate, yellow, neutral.	lb	40
Citrate, M. C. W	lb	66
Cyanide, fused, M. C. W	lb	45
Cyanide, C. P. 99%	lb	52
Cyanide, Miner's, 10-lb tin	lb	28
Ferricyanide, chem. pure, M. C. W	lb	1 04
Ferrocyanide, pure	lb	59
Glycerinophosphate	oz	26
Hypophosphite, M. C. W	lb	99
Iodide, M. C. W., 1-lb boxes	lb	2 52
Iodide, N. Y. Q., 1-lb boxes	lb	2 52
Iodide, cryst. or gran., 1-lb boxes, P.W.R.	lb	2 52
Nitrate, cryst.	lb	10-12
Nitrate, granulated.	lb	10-12

Nitrate, chemically pure, M. C. W	lb	30
Oxalate, neutral.	lb	28
Permanganate, cryst., 1-oz vials	oz	8
Permanganate, large cryst., pure, M.C.W.	lb	27
Permanganate, small cryst	lb	25
Phosphate, 1-oz vials	oz	11
Phosphate	lb	64
Prussiate, red.	lb	65
Prussiate, yellow.	lb	35
Sulphate, cryst. or powd	lb	16
Sulphate, chemically pure	lb	60
Sulphide (Liver Sulphur)	lb	24
Tartrate (soluble Tartar)	lb	59
POWDER, Antimonial.	lb	85
Aromatic.	lb	1 25
Carbolic Acid, disinfecting	doz	1 50
Chalk, aromatic.	lb	75
Chalk, compound.	lb	75
Chalk and Opium.	lb	2 50
Composition, 2-oz papers	lb	35
Dover's	lb	1 70
Insect, Buhach, 6-lb cans	lb	60
Insect, Dalmatian.	lb	25-30
Insect, Mrs. Hill's, 6-lb cans	lb	35
Jalap, comp.	lb	1 00
Licorice, comp.	lb	25
Licorice, comp., 2-oz packages	doz	75
Rhubarb, comp.	lb	1 50
Tooth.	lb	50
PROPYLAMIN, 10% solution	oz	55
Hydrochlorate, ⅛-oz vials.	oz	3 50
PROTARGOL.	oz	1 25
PULVIS ANTIMONIALIS.	lb	85
PYOKTANIN, Blue or Yellow	oz	1 50
PYRIDINE	oz	32
QUICKSILVER.	lb	80
QUINACETINE.	oz	85
QUINALGIN.	oz	1 25
QUININE, Alkaloid, 1-oz vials, M.C.W.	oz	58
Bisulphate, 1-oz vials, M.C.W	oz	28
Bisulphate, 5-oz cans, M.C.W	oz	26
Citrate, 1-oz vials, M.C.W	oz	57
Muriate, 1-oz vials, M.C.W	oz	51
Phosphate, 1-oz vials, M.C.W	oz	55
Salicylate, 1-oz vials, M.C.W	oz	54
Sulphate, 1-oz cans, M.C.W	oz	28
Sulphate, 5-oz cans, M.C.W	oz	25
Sulphate, 25-oz cans, M.C.W	oz	21
Sulphate, 50-oz cans, M.C.W	oz	20
Sulphate, 100-oz cans, M.C.W	oz	18
Sulphate, 1-oz cans, N. Y. Q	oz	28
Sulphate, 5-oz cans, N. Y. Q	oz	25
Sulphate, 25-oz cans, N. Y. Q	oz	21
Sulphate, 100-oz cans, N. Y. Q	oz	18
Sulphate, 1-oz cans, P. W. R	oz	28
Sulphate, 5-oz cans, P. W. R	oz	25
Sulphate, 25-oz cans, P. W. R	oz	21
Sulphate, 100-oz cans, P. W. R	oz	18
Tannate, Neutral	oz	38
Tannate, 1-oz vials, M.C.W	oz	37
Valerianate, 1-oz vials, M.C.W	oz	57
QUINOLINE	oz	45
Tartarate	oz	45
QUINIDINE. N. Y. Q., 1-oz vial	oz	85
Sulphate, N. Y. Q., 1-oz vial	oz	75
RED SAUNDERS.	lb	12
RESIN, Jalap	oz	54
RESORCINOL (Resorcin) M. C. W	lb	1 30
Resorcinol (Resorcin) M. C. W	oz	17

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ROOT, Abscess, pressed, lb.	lb	40
Aconite, powd	lb	35
Aconite, pressed	lb	32
Copaiba. . .	lb	1 50
Scamony	oz	40
Alkanet	lb	25
Alkanet, powd	lb	30
Angelica, pressed	lb	20
Angelica, powd	lb	25
Arnica, pressed	lb	35
Belladonna, pressed, lb.	lb	25
Belladonna, powd	lb	28
Berberis Aquif, pressed, lb.	lb	45
Beth, pressed, lb.	lb	30
Beth, powd	lb	35
Blackberry, pressed, lb.	lb	30
Blood, pressed, lb.	lb	30
Blood, powd	lb	35
Blue Flag, pressed	lb	25
Burdock, pressed, lb.	lb	25
Burdock, powd	lb	25
Calamus, peeled	lb	30
Calamus, white, peeled and split	lb	50
Calamus, powd	lb	35
Cohosh, black, pressed.	lb	25
Cohosh, black, powd.	lb	25
Cohosh, blue, pressed, lb.	lb	25
Cohosh, blue, powd	lb	25
Colchicum	lb	28
Colchicum, powd	lb	35
Columbo, foreign.	lb	25
Columbo, powd	lb	25
Comfrey, pressed, lb.	lb	25
Comfrey, powd	lb	25
Cranesbill, pressed, lb	lb	25
Culvers, pressed, lb	lb	25
Culvers, powd	lb	30
Dandelion, Am., pressed, lb	lb	35
Dandelion, powd	lb	35
Dwarf Elder, pressed, lb	lb	35
Elecampane, pressed, lb.	lb	25
Elecampane, powd	lb	25
Gelsemium, pressed, lb	lb	25
Gelsemium, powd	lb	25
Gentian	lb	18
Gentian, ground	lb	20
Gentian, powd	lb	20
Ginger, African.	lb	17
Ginger, African, powd	lb	18
Ginger, Jamaica, bleached.	lb	27
Ginger, Jamaica, bleached, powd	lb	30
Ginseng	lb	8 50-10 00
Golden Seal	lb	2 40
Golden Seal, powd	lb	2 40
Hellebore, black, pressed	lb	25
Hellebore, black, powd	lb	25
Hellebore, white, pressed, lb	lb	25
Hellebore, white, powd	lb	25
Indian Hemp, black, pressed, lb	lb	35
Indian Hemp, black, powd	lb	40
Indian Hemp, white, pressed	lb	25
Indian Hemp, white, powd	lb	30
Ipecac, Rio, powd	lb	2 50
Jalap	lb	30
Jalap, powd	lb	35
Kava Kava	lb	50
Ladies' Slipper, pressed, lb	lb	75
Licorice, select	lb	16
Licorice, pipestem	lb	18
Licorice, cut, Russian	lb	20
Licorice, powd	lb	16-20
Mandrake, pressed, lb	lb	30
Mandrake, powd	lb	35
Marshmallow, cut	lb	34
Marshmallow, powd	lb	35
Musk	lb	30
Orris, Florentine	lb	25
Orris, Florentine, Fingers	lb	1 25
Orris, Florentine, granulated	lb	35
Orris, Florentine, powd	lb	30
Pareira Brava, pressed	lb	34
Pink. . .	lb	85
Pink, powd.	lb	90
Pleurisy, pressed	lb	25
Poke, pressed	lb	25
Poke, powd	lb	20
Pond Lily, white, pressed	lb	40
Pond Lily, white, powd	lb	40
Pond Lily, yellow, pressed	lb	30
Pond Lily, yellow, powd	lb	35
Rhatany	lb	30
Rhatany, powd	lb	35
Rhubarb, East India	lb	75
Rhubarb, East India, powd	lb	75
Rhubarb, cut in cubes, No. 1	lb	1 25
Rhubarb, cut in cubes, No. 2	lb	1 00
Rhubarb, cut in fingers, No. 1	lb	1 50
Rhubarb, cut in fingers, No. 2	lb	1 25
Salep, powd	lb	1 00
Sarsaparilla, American	lb	35
Sarsaparilla, American, powd	lb	35
Sarsaparilla, Honduras	lb	65
Sarsaparilla, Honduras, ground	lb	65
Sarsaparilla, Honduras, powd	lb	65
Sarsaparilla, Mexican	lb	20
Sarsaparilla, Mexican, ground	lb	25
Sarsaparilla, Mexican, powd	lb	25
Senega, pressed	lb	75
Senega, powd.	lb	80
Silkweed, pressed	lb	28
Skunk Cabbage, pressed	lb	30
Skunk Cabbage, powd	lb	35
Snake, Canada, pressed	lb	65
Snake, Virginia	lb	65
Snake, Virginia, powd	lb	70
Spikenard, pressed	lb	72
Spikenard, powd	lb	30
Squills, white, sliced.	lb	20
Squills, powd	lb	60
Stillingia, pressed	lb	25
Stillingia, powd	lb	30
Stone, pressed	lb	25
Sweet Flag, pressed	lb	25
Turkey Corn	lb	28
Unicorn, true, pressed	lb	35
Unicorn, true, powd	lb	40
Unicorn, false, pressed	lb	40
Unicorn, false, powd	lb	45
Valerian, English, bulk	lb	35
Valerian, English, powd	lb	35
Valerian, German	lb	30
Valerian, German, powd	lb	30
Yellow Dock	lb	25
Yellow Dock, ground	lb	30
Yellow Dock, powd	lb	30
Zedoary	lb	30
ROSIN, No. 1.	lb	6-8
Barrel. . .		7 75
ROUGE, Jewelers'	lb	50
SACCHARIN	tin	35

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SAFFRON, American	lb	60
Spanish	oz	80
Spanish	lb	10 50
SAL, Acetosella	lb	30
Epsom	lb	2½-5
Glauber	lb	1½-4
Nitre	lb	10-12
Nitre, granulated	lb	10-12
Nitre, powd	lb	10-12
Prunelle	lb	45
Rochelle	lb	28-30
Soda	lb	3-5
Tartar	lb	15
SALICINE	oz	37
	lb	4 60
SALIPYRINE	oz	1 00
SALOL, Mallinckrodt's	oz	15
Salol, Mallinckrodt's, cartons	lb	1 17
SALOPHEN	oz	1 00
SANTONIN, bulk, M. C. W	lb	8 25
1-oz vials, M. C. W	oz	60
SEED, Angelica	lb	25
Anise, Italian	lb	20
Anise, Italian, powd	lb	25
Anise, Star	lb	45
Bird, mixed, bulk	lb	8
Bird, mixed, boxes	doz	1 00
Bird, mixed, cases, 30 pks		2 25
Burdock	lb	25
Canary	lb	9-10
Carraway, Dutch	lb	15
Carraway, powd	lb	17
Cardamon, Malabar	lb	1 00
Cardamon, Mangalor, bleached	lb	1 25
Cardamon, powd	lb	1 00
Celery	lb	25
Colchicum	lb	50
Colchicum, powd	lb	55
Conium	lb	25
Coriander, German	lb	14
Coriander, German, powd	lb	20
Cumin	lb	18-20
Dill	lb	25
Fennel	lb	18
Fennel, powd	lb	20
Flax, recleaned	lb	5½-6
Flax, ground	lb	5½-6
Flax Oil Cake	lb	2½-3½
Foenugreek, powd	lb	12
Hemp, recleaned	lb	6½-8
Henbane	lb	35
Larkspur	lb	55
Lobelia	lb	60
Lobelia, powd	lb	65
Millet, American	lb	6-8
Mustard, black, Trieste	lb	10-12
Mustard, white	lb	10-10
Poppy Blue	lb	16
Pumpkin	lb	22
Rape, California	lb	6-8
Quince	lb	85
Sabadilla	lb	35
Sabadilla, powd	lb	30-35
Stavesacre	lb	40
Stavesacre, powd	lb	45
Stramonium	lb	25
Stramonium, powd	lb	30
Sunflower	lb	15
Watermelon	lb	25
Worm, American	lb	25
Worm, American, powd	lb	25

Worm, Levant	lb	35
Worm, Levant, powd	lb	40
SEIDLITZ MIXTURE	lb	28-30
SILVER, Bromide, 1-oz. vials, M. C. W	oz	1 19
Chloride, 1-oz vials, M. C. W	oz	84
Cyanide, 1-oz vials, M. C. W	oz	1 04
Iodide, 1-oz vials, M. C. W	oz	1 04
Lactate	oz	1 04
Nitrate, cryst., 1-oz vials, M. C. W	oz	53
Nitrate, cones, 1-oz vials	oz	65
Nitrate, fused (Lunar caustic), 1-oz vials, M. C. W.	oz	56
Nitrate, cryst., 1-oz vials, P. W. R	oz	53
Nitrate, cryst., 1-lb vials, P. W. R	lb	8 25
Nitrate, fused, No. 2, 1-oz vials	lb	42
SNUFF, Garrett's, 1-oz tins	doz	60
Garrett's, 1⅔-oz tins	doz	1 10
Garrett's, 3⅓-oz tins	doz	1 75
Garrett's, 6-oz bots	doz	3 25
Maccaboy, 3⅓-oz bots	doz	2 00
Rappee	lb	65
Rappee, 3⅓-oz bots	doz	2 00
Scotch, Lorillard's	lb	65
Scotch, Lorillard's	doz	2 00
Scotch, Garrett's Bladders	lb	55
SOAP, Castile, Conti's, white, box 14c less	lb	17
Castile, mottled, box 8½c; less	lb	12
Castile, powdered, white	lb	35
Green, German	lb	25
Opodeldoc	lb	65
SODA, Ash	lb	2½-5
Caustic, Sticks	lb	34
Caustic, com., drums	lb	3-4
Caustic, com., 10-lb drums	lb	6½-7½
Caustic, purified, fused	lb	40
Sal (carbonate) bbls., 1¾c	lb	3
Soda Silicate, dry	lb	35
Soda Silicate, liquid	lb	15-25
SODIUM, 1-oz vials, M. C. W	oz	25
Acetate, M. C. W., carton	lb	17
Arseniate, 1-oz vials	oz	9
Arsenite, 1-oz vials, M. C. W	oz	10
Benzoate, 1-oz vials, M. C. W	oz	11
Benzoate, 1-lb bots	lb	56
Benzoate, true fr. Gum Benzoin	oz	29
Bicarbonate, C. P., powd., M. C. W	lb	15
Bicarbonate, kegs, 3c	lb	4-5
Bisulphite, dry, pure	lb	27
Borate, neutral	oz	19
Bromide, M. C. W	lb	32
Cacodylate	oz	84
Carbonate, pure cryst., 1-lb car., M. C. W	lb	11
Carbonate, pure gran., 1-lb car., M. C. W	lb	11
Carbonate, dried, C. P., 1-lb car	lb	27
Cinnamate	oz	59
Citrate, M. C. W	lb	67
Glycerophosphate, 75%	oz	24
Glycocholate	oz	1 04
Hypophosphite, purified	lb	1 14
Hypophosphite, 1-oz vials	oz	15
Hyposulphite, 112-lb kegs	lb	3
Hyposulphite, less	lb	5
Iodide, 1-oz vials, M. C. W	oz	31
Iodide, M. C. W	lb	3 53
Nitrate, cryst., C. P	lb	29
Nitrate, gran., pure, 1-lb cartons	lb	18
Phosphate, pure, recryst., bulk	lb	12
Phosphate, gran., pure, M. C. W	lb	13
Phosphate, dried, powd	lb	24
Salicylate, 1-lb box, P. W. R	lb	50
Salicylate, 1-lb box, M. C. W	lb	50

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Santoninate	oz	89
Succinate	oz	45
Sulphate, Glauber Salts	lb	3-5
Sulphate, Glauber Salts, bbl	lb	1½
Sulphate, dried	lb	18-20
Sulphite, crystals	lb	10
Sulphite, granulated	lb	18
Sulphite, dry	lb	22
Tartrate	lb	64
SOLUTIONS, Donovan's	lb	34
Fowler's	lb	30
Goulard's	lb	35
Nitrate, Iron	lb	50
Mercury, Nitrate	oz	20
Monsel's	lb	50
Tin, Chloride	lb	35
SOMATOSE, Biscuit, 8-oz boxes	doz	4 00
Somatose, Ferro, 2-oz tins	doz	10 50
Somatose, 2-oz tins	doz	8 25
Somatose, 1¼-lb tins	lb	5 25
Somatose, 1½-lb tins	lb	5 00
SOZOIODOL, Mercury	oz	1 15
Potassium	oz	75
Sodium	oz	80
Zinc	oz	1 10
SPARTEINE, Sulphate, ⅛s	oz	83
Sulphate, 15-gr. vials	ea	12
SPERMACETI, in cakes	lb	42-45
SPIRIT, Ammonia	lb	75
Ammonia, aromatic	lb	85
Camphor	lb	75
Chloroform, U. S. P	lb	75
Lavender	lb	60
Nitre, U. S. P., 1-lb bots	lb	65
Nitre, U. S. P., 4-lb bots	lb	58
Nutmeg	lb	75
Pimento	lb	65
Rosemary	lb	65
STEARIN	lb	20
STONE, Pumice, select	lb	10
Pumice, select, powd	lb	8-10
Rotten	lb	12-15
Rotten, powd	lb	10
Soap, cut	lb	18
Soap, powd	lb	8
STRONTIUM, Bromide, cryst., M. C. W.	oz	11
Carbonate, M. C. W	lb	34
Hypophosphite, M. C. W	oz	29
Iodide, 1-oz vial, M. C. W	oz	30
Lactate	oz	16
Muriate, M. C. W	lb	32
Nitrate, pure, dried	lb	59
Salicylate, M. C. W	lb	83
Sulphate, M. C. W	lb	69
STYPTICIN	oz	6 50
STRYCHNINE, Acetate, ⅛-oz vials, M.C.W.	oz	1 75
Arsenate, ⅛-oz vials, M. C. W	oz	1 75
Bromide, ⅛-oz vials, M. C. W	oz	1 75
Citrate, ⅛-oz vials, M. C. W	oz	1 75
Crystals, ⅛-oz vials, M. C. W	oz	1 15
Hypophosphite, ⅛-oz vials, M. C. W	oz	2 00
Muriate, ⅛-oz vials, M. C. W	oz	1 75
Nitrate, ⅛-oz vials, M. C. W	oz	1 75
Phosphate, ⅛-oz vials, M. C. W	oz	1 80
Sulphate, ⅛-oz vials, M. C. W	oz	1 45
Sulphate, 1-oz vials, M. C. W	oz	1 25
Sulphate, 1-oz vials, P. W. R	oz	1 25
Crystals, 1-oz vials, N. Y. Q	oz	95
Crystals, in bulk, N. Y. Q	oz	90
Powdered, in bulk, N. Y. Q	oz	85

Powdered, ⅛-oz vials, N. Y. Q	oz	1 10
Powdered, 1-oz vials, N. Y. Q	oz	90
STYRAX, liquid,	lb	60
SUGAR, burnt	lb	25
Grape	lb	25
Milk, crystals	lb	30
Milk, powd., bulk	lb	23
Milk, powd., M.C.W., 1-lb cartons	lb	25
SULFONAL, 1-oz vials	oz	1 35
SULPHON-ETHYL-METHANE	oz	60
SULPHON-METHANE	oz	50
SULPHUR, California, ground, 110-lb bags	lb	2
Flowers	lb	5
Flowers, in bags	lb	2¾-3
Iodide	oz	38
Lac., precip	lb	18
Roll, bbl	lb	2¾-5
Sicily, ground	lb	5
Strips	lb	15
Washed	lb	15
SUMAC	lb	10
SYRUP, Ginger, U. S. P	lb	65
Hydriodic Acid	lb	70
Iron Iodide	lb	65
Ipecac	lb	60
Lactucarium	lb	1 00
Orange Peel	lb	65
Rhubarb	lb	60
Rhubarb, Aromatic	lb	65
Rhubarb and Potash	lb	65
Sarsaparilla	lb	65
Sarsaparilla, comp	lb	65
Senna	lb	65
Senega, U. S. P	lb	65
Simple	lb	35
Squill	lb	60
Squill, comp	lb	60
Stillingia, comp	lb	60
Tolu	lb	60
Wild Cherry	lb	60
Yerba Santa comp	lb	65
TALCUM, powdered	lb	6-8
Purified	lb	20-25
TAMARINDS, pound bottles	lb	25
Keg	ea	4 50
Pulp	lb	50
TANNALBIN	oz	85
TANNIN, 1-lb cartons, incl	lb	85-90
1-oz cartons, incl	oz	12
TANNIGEN	oz	75
TANNOFORM	oz	22
TANNOPINE	oz	75
Veterinary	oz	25
TAR, Barbadoes	lb.	25
Coal	gal	25
Pine, bulk	gal	40
Pine, ½-lb cans	doz	75
Pine, 1-lb cans	doz	90
Pine, 2-lb cans	doz	1 50
Pine, gal cans	doz	6 00
TARTAR EMETIC, M. C. W	lb	50
TEREBENE, 1-lb bottles.	lb	79
	oz	14
TERPIN HYDRATE, cryst.	oz	9
Pounds	lb	55
TERPINOL, Liquid	oz	47
THEOBROMINE, Alkaloid	oz	90
And Sodium Salicylate	oz	60
THIOL, dry	oz	1 00
Liquid	oz	40

***Articles quoted in this Journal as M. C. W. are the products of the Mallinckrodt Chemical Works.**

THYMOL, 1-oz vials	oz	27
Pounds	lb	3 10
THYROIDIN	oz	1 30
TIN, Chloride	lb	53
Metallic, feathered	lb	1 00
Muriate, solution	lb	35
Oxide, white, pure	lb	99
TINCTURE, Aconite Leaves	lb	65
Aconite Root	lb	75
Aconite Root, Fleming's	lb	90
Aloes	lb	65
Aloes and Myrrh	lb	65
Arnica	lb	65
Asafœtida	lb	65
Belladonna	lb	65
Benzoin	lb	75
Benzoin, comp	lb	75
Blood Root	lb	65
Buchu	lb	65
Cantharides	lb	75
Capsicum	lb	65
Cardamom	lb	75
Cardamom, comp	lb	75
Catechu, comp	lb	75
Cinchona, comp	lb	75
Cinnamon	lb	65
Colchicum Root	lb	75
Colchicum Seed	lb	75
Columbo	lb	60
Conium	lb	65
Cubebs	lb	65
Digitalis	lb	65
Ergot	lb	75
Ergot, ethereal	lb	80
Galls	lb	60
Gelsemium	lb	75
Gentian	lb	60
Gentian, comp	lb	65
Ginger	lb	65
Guaiac	lb	75
Guaiac, ammoniated	lb	75
Guaiac, Dewees'	lb	75
Hyoscyamus	lb	65
Iodine	lb	1 40
Iodine, colorless	lb	1 40
Iodine, comp.	lb	1 40
Iodine, Churchill's.	lb	1 75
Ipecac	lb	80
Iron Acetate	lb	65
Iron Chloride	lb	50
Iron Citro-Chloride	lb	65
Jalap	lb	65
Kino	lb	75
Lobelia	lb	60
Lobelia, ethereal	lb	65
Myrrh	lb	75
Myrrh and Capsicum	lb	75
Nux Vomica	lb	65
Opium	lb	1 25
Opium, camphorated	lb	60
Opium, deodorized	lb	1 30
Orange Peel	lb	65
Quassia	lb	60
Rhatany	lb	60
Red Saunders	lb	65
Rhubarb	lb	65
Rhubarb, Aqueous	lb	60
Rhubarb, Aromatic	lb	70
Rhubarb, comp	lb	65
Rhubarb, Sweet	lb	65
Rhubarb and Aloes	lb	65

Rhubarb and Senna	lb	65
Senna	lb	65
Senna, comp	lb	65
Serpentaria	lb	65
Stramonium Leaves	lb	65
Stramonium Seed	lb	65
Strophanthus	lb	1 25
Tolu	lb	75
Valerian	lb	65
Valerian, ammoniated	lb	85
Veratrum Viride	lb	65
Warburg's	lb	1 75
TRIKRESOL, S. & G.	lb	60
TRIMETHYLAMINE	oz	55
TRIONAL	oz	1 50
TRIPOLI, bulk	lb	8-12
TURPENTINE	gal	95
In case	gal	90
Chian	oz	45
Venice	lb	35
URANIUM, Acetate, 1-oz vials	oz	59
Chloride, 1-oz vials	oz	47
Nitrate, 1-oz vials	oz	45
Sulphate, 1-oz vials	oz	47
UROTROPIN	oz	60
Tablets, 20 in box	box	25
UNGUENTUM CREDE, ½-oz jars	oz	90
URETHANE	oz	54
VANILLIN, 1-oz vials	oz	75
VERATRINE, pure, ⅛-oz vials	oz	2 40
VERONAL, powd.	oz	1 60
Tablets, 10c.	ea	30
Tablets, 100s	ea	2 25
VERDIGRIS	lb	40
Powdered	lb	45
WATER, Cherry, Laurel	pt	50
Chlorine	lb	40
Distilled.	gal	8
Elder Flower	lb	50
Orange Flower, triple	lb	35
Orange Flower	gal	2 00
Orange Flower, Chiris, small	doz	2 00
Orange Flower, Chiris, large	doz	3 75
Rose, triple	lb	40
Rose	gal	2 00
Rose, Chiris, 6¾-gal coppers	gal	1 75
Rose, Chiris, small	doz	2 00
Rose, Chiris, large	doz	4 00
WAX, Bayberry	lb	45
Bees, yellow, refined.	lb	37-40
Bees, yellow, oz.	lb	45
Bees, white, extra.	lb	60
Bees, white, No. 1.	lb	55
Bowdlear's 1-lb cartons	doz	4 20
Fruit, can, red	lb	8
Fruit, can, white	lb	8
Japan	lb	18-20
WAX, FLOOR	lb	25-38
Johnson's, 1-lb cartons	doz	4 00
Johnson's, ½-lb cartons	doz	2 25
Johnson's, ¼-lb cartons	doz	1 40
WHITING, Gilders'	lb	3
Spanish	lb	2½
WINE, Antimony	lb	65
Aromatic	lb	65
Colchicum Root	lb	75
Colchicum Seed	lb	65
Ergot	lb	1 25
Ipecac	lb	1 25
WOOD, Brazil, ground	lb	10
Camwood	lb	10

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Fustic, cut	lb	3½-5
Fustic, ground	lb	6
Guaiac, rasped	lb	10
Hypernic.	lb	8-10
Logwood, chip.	lb	8-10
Logwood, ground.	lb	8-10
Nic.	lb	8-10
Quassia, chip.	lb	15
Quassia, ground.	lb	18
Quassia, powdered.	lb	18
Red Sanders, ground.	lb	12
Red, cut.	lb	10
XANTHOXYLIN, Keith's	oz	1 13
XYLOL	lb	70
ZINC, Acetate, 1-lb bottles, M. C. W	lb	43
Benzoate	oz	24
Benzoate, 1-oz vials, M. C. W	oz	24
Carbolate, 1-oz vials, M. C. W	oz	24
Carbonate, precipitate, 1-lb cartons	lb	25
Chloride, fused, 1-oz vials	oz	13
Chloride, granulated	lb	33
Cyanide, 1-oz vials, M. C. W	oz	21
Hypophosphite, 1-oz vials	oz	29
Iodide, 1-oz vials, M. C. W	oz	37
Metallic, pure, feathered	lb	27
Oxide, English, Hubbuck's.	lb	50
Oxide, pure, M.C.W.	lb	30
Permanganate	oz	52
Phosphate, M. C. W	oz	10
Phosphide	oz	23
Sulphate, cryst.	lb	8-10
Sulphate, cryst., chemically pure, M.C.W.	lb	18
Sulphide, 1-oz vials, M. C. W	oz	16
Sulphocarbolate, M. C. W	lb	59
Sulphocarbolate, 1-oz vials, M. C. W	oz	11
Sulphate, H. P.	lb	15
Sulphate, dried, H. P.	lb	25
Sulphocarbolate	oz	11

MINERAL WATERS.

	Case	Dozen
Apenta Bitter Water, 50 bots in case	$10 00	$2 65
Apollinaris, 50 qt bots in case	8 50	2 25
Apollinaris, pints.	12 00	1 60
Buffalo Lithia, 12 ½-gal. bots in case	6 00	....
Bartlett, 50 qt. bots. in case	8 00	2 25
Bethesda, 50 qt. bots. in case	7 50	2 25
Bethesda, 12 ½-gal. bots. in case	5 50	....
Bythinia Water	10 00	2 50
Carlsbad, Sprudel, 30 qt. bots. in case	11 00	4 50
Carlsbad, Muhlbrun, 50 qt. bots. in case	18 00	4 75
Congress (Saratoga), 48 bots. in case	8 00	2 50
Franz Joseph, 50 bots. in case	11 00	3 00
Garrod Spa Lithia, pints	6 00	2 00
Garrod Spa, Lithia, ½-gal.	.....	5 00
Hathorn, 48 pt. bots. in case	8 00	2 50
Hunyadi Janos (in case), 50 qt. bots.	11 00	3 00
Hunyadi Matyas, 50 qt. bots. in case	9 00	2 50
Londonderry Lithia, 50 qt. bots. in case	10 00	2 50
Londonderry Lithia, ½ gallons	9 50	6 50
Londonderry Lithia, 100 pints	13 50	1 75
Poland, qts., 50 to case	9 00	2 50
Rackoczy Kissengen	.....	5 00
Red Raven Splits.	5 00	1 35
Rubinat Condal, 50 pt. bots. in case	14 00	3 75
Veronica	.....	5 50
Vichy Water Celestine	10 25	3 00
Risk of breakage is assumed by buyer.		
Villacabras Water, qts., 50 bots. in case	17 50	4 50
Witter, 36 bots in case	12 00	4 50
White Rock Splits.	9 90	1 20
White Rock, pints	11 50	1 50
White Rock, quarts.	8 85	2 25

(Cash discount 5% on case prices White Rock.)

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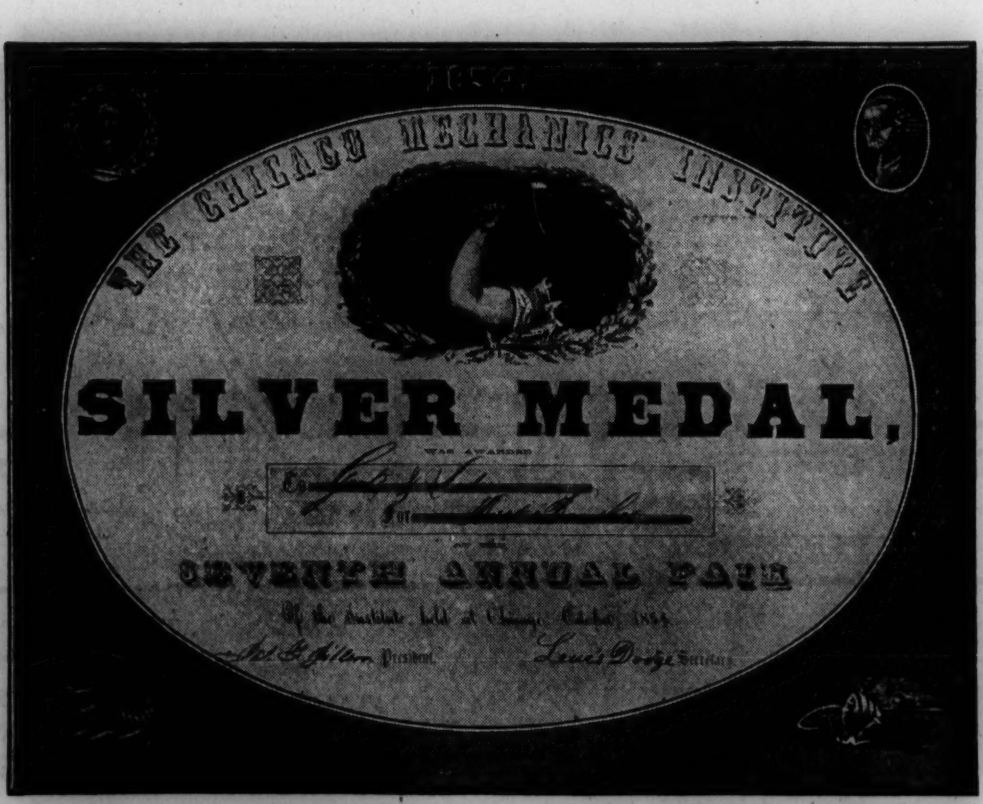

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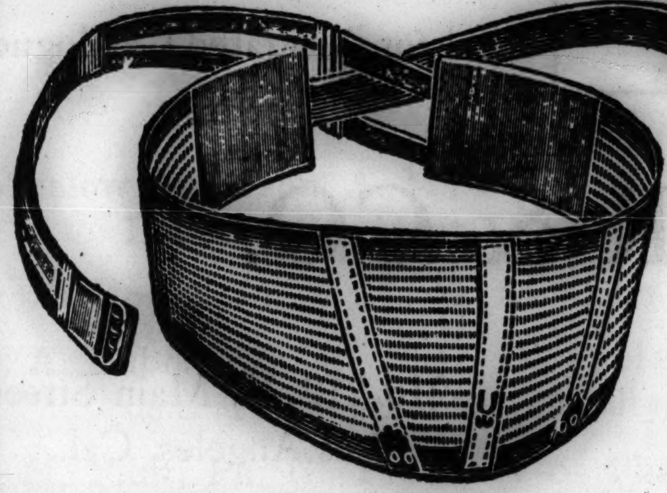

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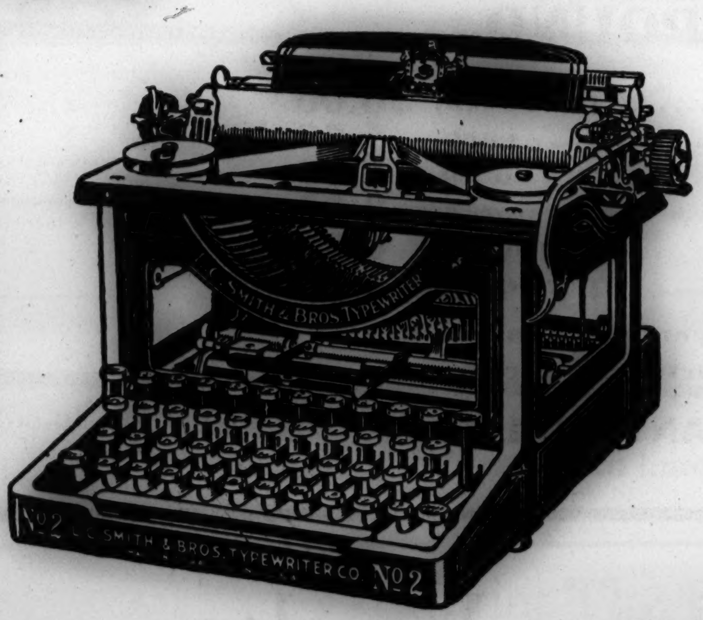
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